Sierra Leone 150

SIERRA LEONE GOVERNMENT

JAN 24 1966

D R A F T

FIVE YEAR PLAN

of

ECONOMIC AND SOCIAL DEVELOPMENT

July 1, 1966 - June 30, 1971

RESEARCH FILES
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TABLE OF CONTENTS

FOREWORD

I. BACKGROUND TO THE DEVELOPMENT PLAN

A. Summary of Progress since Independence

B. Long-Term Economic Assessment of Sierra Leone

C. Strategy of the Five Year Plan including Economic Policies to Promote Development

D. Objectives, Size, and Structure of Plan

E. Resources and Financing 1961-71

II. SECTORAL PROGRAMMES

A. Basic Information

Physical Resources

B. Agricultural Development

C. Water Resources

D. Electric Power

E. Geology and Mines

F. Transport and Communications

G. Town Planning and Housing

H. Industry and Trade

Human Resources

I. Education

J. Health

K. Social Welfare

L. Information and Broadcasting

M. Public Administration

III. RESOURCES AND FINANCING

A. Financing of Public Sector Development

B. Financing of Private Sector Development

C. Summary of Public and Private Sector Financing

D. Summary of Development Expenditures 1962-71

E. Balance of Payments

F. External and Internal Public Indebtedness

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

FOREWORD

i

to be written by Prime Minister

SECRET
Security Information

GENERAL LOCAL FIVE YEAR DEVELOPMENT PLAN

SUMMARY OF ECONOMIC SITUATION INDEPENDENCE

SECRET
Security Information

18 NOV 1965

E. LONG-TERM ECONOMIC ASSESSMENT OF SIERRA LEONE

To assess the long-term economic prospects of Sierra Leone it is necessary to examine the development potentials of the nation such as natural resources, people, capital, government policy, and private enterprise. In the absence of considerable basic statistical data, such an examination must necessarily be of a general nature.

Gross National Product. There are no reliable estimates of Sierra Leone's domestic product. It is believed today to be in the neighborhood of Le 175,000,000. Agriculture is the most important segment of the economy from the point of view of income earned and population employed, with mining second. Industry and construction have only assumed some importance since Sierra Leone became independent on 27 April 1961.

1. Natural resources. The known natural resources of Sierra Leone are in agriculture and minerals.

Agriculture. Nearly 70% of the population is engaged in predominantly peasant agriculture based on a tribal land tenure system. The farmers grow a variety of crops, most for subsistence, some for cash. The three major crops are rice, cassava, and palm products, but there is also cocoa, coffee, tobacco, ginger, etc. There are oil palm plantations run by the Sierra Leone Produce Marketing Board while coffee, cocoa, and other crops are grown by small planters.

The total value of the marketed agricultural production of the country today is estimated at Le 30,000,000 of which Le 8,000,000 is exported. In the last 10 years the value of

agricultural exports has dropped as a result of falling world prices for primary commodities and as men left the farms to work in the diamond mining areas. This drop in exports has been accompanied by a rise in food imports, leaving at the moment a net trade deficit in farm products.

In view of the absence of population pressures on land resources and its topography, climate and soils, Sierra Leone should be able to correct the current disequilibrium in trade of agricultural products, both internal and external. Agricultural productivity can be increased through extension of knowledge and increase of incentives to the farmers. A rise in production, accompanied by improved credit and local marketing arrangements, will provide more foodstuffs for local consumption as well as raw materials for exports.

Other Resources. In addition to its relatively undeveloped land resources, Sierra Leone also has ample water, forestry and fisheries resources awaiting more intensive development. The country has an annual precipitation of 150 inches, much of which finds its way into half a dozen river basins. The amount of land cultivated could be tripled by a combination of swamp reclamation and irrigation works, leading to settled farming and the production of higher revenue-yielding commodities. While the greater part of the country's timber-bearing forests have long since been cleared for farming, current and planned conservation, logging and sawmilling practices will ensure that over half the country's requirements for timber for housing and furniture will be met. The rivers and coastal areas are rich in fish; programmes, private and public, are underway to develop this sector.

Minerals. The mining industry has been developed since the 1930s, when iron ore, chrome ore, gold, and diamonds were first exploited. A diamond boom started in the 1950s which continues today. While chrome ore and gold production have tapered off, bauxite and rutile production have started. Today exports

of diamonds and iron ore constitute over 80% of Sierra Leone's total exports. Active geological exploration continues to locate additional underground resources.

2. People. The success of any nation's development plan is naturally largely dependent on its people, their attitudes, and their productivity.

Working Force. The population of Sierra Leone was counted at 2,180,355 in the Population Census of 1963. The Census classified the working force of 900,000 into the following industries:

Agriculture	702,000	77.3%
Mining	47,600	5.3
Manufacturing	41,200	4.6
Construction	16,200	1.8
Electricity, gas and water	2,200	.2
Commerce	53,100	5.9
Transport	16,200	1.8
Services	29,500	3.2
Total Working Force	900,000	100.0%

Skilled Manpower. Of this working population, only 13,400 or 1.5% were classified as professional, technical, administrative and managerial level personnel. Hence Government is beginning to reorient its educational system to train the manpower talent required to run the country's economic and administrative machinery. Professional personnel must be trained to replace expatriots and substantial numbers of middle grade personnel must be provided to staff a growing nation.

Education. Sierra Leone has a long tradition of education, dating from the founding of Fourah Bay College in 1827.

23 NOV 1965 .MF

About % of school children are in primary school and % in secondary school. School attendance is being increased at the rate of 11.4% per year as teacher training is expanded and foreign aid is received for school construction and equipment.

Motivation. Steps are being taken to influence people's aspirations and their will to attain a higher standard of living. Workers must be helped and encouraged in their efforts toward greater productivity to satisfy their needs. Government and others must assist workers through education, health services, technical advice, credit and marketing arrangements toward more intensive production and marketing of commodities and goods and toward greater activity in transport, construction, and services.

3. Capital.

GNP. While no national accounts have ever been prepared, the following estimates have been made regarding Sierra Leone's annual balance of resources in 1965:

Gross Domestic Product	Le 175,000,000
Imports	73,000,000
Total Supply of Resources	Le 248,000,000

Public Investment (incl Gov't corporations)	8,000,000
Public Consumption	36,000,000
Private Investment	14,000,000
Private Consumption (residual)	124,000,000
Exports	66,000,000
Total Uses	Le 248,000,000

yielding an estimated per capita GNP of Le 80. Domestic savings outstanding are estimated at Le 8,000,000, currently growing at about Le 650,000 per year.

The monetary sector with only 80,000 - 100,000 workers, is still quite small but the number of workers is growing at the rate of 4% per year. The majority of the population live in a subsistence economy.

Public Finance. The Government spends an amount equal to about 23% of the GNP, of which 90% comes from domestic revenue and 10% from external sources. The main domestic sources of revenue are customs duties, income and profit taxes, excise duties, licence fees, etc. Actual Government revenues and expenditures during the 1962-65 financial years were: (in Leones)

	1962-63	1963-64	1964-65
Total domestic revenues	28,782,000	34,305,000	36,252,000 est.
external income	2,374,000	4,656,000	4,000,000 est.
Total recurrent exp.	29,225,000	31,820,000	35,522,000 est.
development exp.	5,606,000	7,100,000	7,000,000 est.

Total domestic revenues have shown a steady increase in recent years but an increasing proportion of General Revenue has been devoted to recurrent expenditure, leaving a falling proportion for development expenditure. Thus Government has become increasingly dependent on external sources of income for development expenditure.

Government recognises the need to mobilise additional local resources through such measures as the modernisation of the revenue system and the floating of public loans to mobilise domestic savings. It also is seeking to obtain external resources through long-term loans at reasonable interest rates to finance specific development projects.

Public Debt. The Government's indebtedness has shown a steady increase since Independence.

As of 31 December	1962	1963	1964	(30 Sept) 1965
External debt	Le 36,300,000	38,700,000	52,500,000	50,900,000
Internal debt	4,539,000	4,539,000	4,939,000	4,939,000

To be verified by MF

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23 NOV 1965

Balance of Payments

		Calendar Year 1963		1964
Current Account				
Imports (F. O. B.)	Le	-52,700,000	Le	-62,500,000
Exports and Re-exports		+52,000,000		+62,800,000
Official Grants (Foreign Aid)		+ 2,700,000		+ 1,700,000
Other invisibles (net)		-17,700,000		-18,600,000
Total Net Outflow - Current	Le	-15,700,000	Le	-16,600,000
Capital Account				
Long Term				
Central Government (Pay'ts Abroad)	Le	+ 7,500,000	Le	- 400,000
Private Long Term Investment Other Official		+ 7,900,000		+13,400,000
Short Term				
Central Government (Pay'ts Abroad)		- 1,900,000		+ 2,700,000
Private Investment		- 700,000		+ 400,000
Total New Inflow - Capital	Le	+12,800,000	Le	+16,100,000
Total Net Current and Capital Outflow	Le	- 2,900,000	Le	- 500,000
Balance of Monetary Movement		+ 4,700,000		+ 3,500,000
Errors and Omissions		- 1,800,000		- 3,000,000

Source: Bank of Sierra Leone

Source: Bank of Sierra Leone

Thus in Sierra Leone foreign capital contributes finance for % of the public investment and % of the private investment. Investment out of domestic resources is small, probably only % of GNP. In the years ahead there must be a continuing appraisal of the potential of the economy to generate domestic finance and foreign exchange.

4. Government Policy. The Government of Sierra Leone, like those of most emerging nations, is deeply concerned with economic and social development. In its desire for rapid progress, the Government has made substantial investments in infrastructure and in industry, agriculture, agricultural processing, and tourism.

Infrastructure. In the postwar period increasing attention has been given to developing Sierra Leone's infrastructure. Freetown has one of the best natural harbours in the world. The country has a relatively well-developed system of transportation and communications including 360 miles of railways and miles of trunk highway. There are reasonably adequate supplies of water and electricity in the principal cities and towns.

Improvements in the social infrastructure have been less spectacular. In the four years since Independence the number of school classrooms has risen from 3,712 to 5,100. Hospital beds in Government, missionary, and mining company hospitals have increased from to . Housing construction (as opposed to Government buildings) has been restricted by lack of funds. Government has initiated a series of surveys to develop more basic information on the country's resources.

Government development expenditure since Independence are summarized in the table below:

DEVELOPMENT EXPENDITURES
In Leones

Sector	1961-62	1962-63	1963-64	1964-65	Total 1961-65
PHYSICAL RESOURCES					
Agricultural:					
Agriculture	295,457	170,158	225,373	245,000	935,988
Veterinary	29,670	23,879	24,407	18,000	96,036
Forestry	8,528	158	23,260	50,555	82,501
Fisheries			600	2,920	6,520
Subtotal	297,655	194,194	273,610	329,455	1,121,115
Electric Power	551,720	273,448	1,226,590	1,719,491	3,771,179
Water Resources	118,296	160,242	311,690	174,000	754,008
Geological Survey	140,524	129,264	119,726	162,000	551,614
Transportation:					
Highways	506,198	1,202,278	988,001	305,472	3,102,039
Government vehicles	71,344	198,390	508,164	410,924	1,456,702
Railway	54,192	23,491	45,240	136,652	259,523
Ports	100,752	40,003	137,916	36,871	324,542
Airports	145,353	56,060	72,500	10,353	284,376
Posts & Telecommunications	573,100	124,200	508,721	322,506	1,673,276
Subtotal	1,451,673	1,727,422	2,208,720	1,372,783	6,760,538
Housing	129,062	30,154	44,033	?	
Public Buildings	963,200	775,400	1,036,348	?	
Participation in Industrial Enterprises	17,301	28,857	191,376	207,970	525,504
Total Physical Resources	3,645,591	3,318,941	5,473,058	4,055,699	
HUMAN RESOURCES					
Education	1,377,000	875,000	650,685	602,003	3,506,108
Health	193,329	96,023	94,000	?	
Social Welfare	33,655	6,826	17,121	6,000	63,592
Information	27,885	55,745	254,927	?	

Source: Progress Report

To be verified and completed by MF

See BSL Quarterly Stat Reviews

5. Private Enterprise. The industrial sector is still relatively small. A number of new manufacturing enterprises have been established in recent years. Government has adopted an "open door policy" to encourage foreign investment. The Development Ordinance of 1961 offers new industries a tax holiday for a period of up to 5 years.

To be expanded by RLC

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

C. STRATEGY OF THE FIVE YEAR PLAN

Including ECONOMIC POLICIES TO PROMOTE DEVELOPMENT

To be drafted by RLC

and submitted to Economic Policy Coordination Committee

for discussion and approval at its December meeting

D. OBJECTIVES, SIZE, AND STRUCTURE OF PLAN

Summary of Part II as eventually adopted

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

E.

RESOURCES AND FINANCING 1961-71

Summary of Part III as eventually adopted

26 NOV 1965

II. A. BASIC INFORMATION CHAPTER

Over the years Government has been steadily broadening its programme for the collection, compilation, and publication of basic information on the country and its economic and social life. During the Plan period (1966-71) it is planned to expand the statistical activities of the two new agencies, the Central Statistics Office and the Bank of Sierra Leone's Research Department, as well as to continue the mapping programme commenced by the Surveys and Lands Division in the immediate post-war period.

Other statistical data will continue to be collected as a part of Government's daily administration. Information of this kind is regularly assembled by the Ministry of Finance's fiscal branches and by many other Departments and Corporations, including Agriculture, Civil Aviation, Education, Electricity, Health, Immigration, Labour, Meteorological, Mines, Police, Ports, Posts and Telecommunications, Railway, Social Welfare, and Works.

CENTRAL STATISTICS OFFICE

The Central Statistics Office, established in 1963, plans to expand its staff and to acquire additional data processing equipment in order to achieve a minimum well-rounded statistical programme which will provide essential data for economic and social development.

On-going activities to be continued include publication of the Final Report on the Population Census of 1963, gradual expansion of the coverage of the Quarterly Statistical Bulletin instituted in 1964, completion of the Agriculture Statistical Survey in 1966, continuance of wage and hour surveys and the more

rapid publication of external trade statistics through use of modern processing and printing equipment.

New activities to be initiated during the five years ahead include the following:

a. Population. Review and expansion of vital registration system on births and deaths. Planning for a Population Census in 1970.

b. Census of Housing in connection with 1970 Population Census.

c. Education. CSO assistance to Ministry of Education in tabulating data on education activities.

d. Health. Similar CSO assistance to Ministry of Health.

e. Personal Income and Expenditure. National sample household income-expenditure survey to be initiated in 1966. Improvement and expansion of Consumer Price Index to cover all urban areas.

f. Agriculture. Completion of the Agricultural Survey now under way, and continuing annual sample surveys on land utilization, crop and livestock production, prices and means of cultivation.

g. Labour. Sample surveys on employment. Surveys of hours and earnings, wage rates, labour market, and working conditions.

h. Industry. Periodic surveys to obtain information about kinds and numbers of establishments, production, employees, raw materials, equipment, and power used. Sample surveys on small and cottage industries.

i. Wholesale, Retail, and Service Trades. Sample surveys as to kind of business, employees, sales, gross margins, inventories, prices, and equipment.

j. Transportation. Continuing survey on number, type, and size of road and water carriers and on kinds, volume, and pattern of traffic carried.

k. External Trade. Development of quantum and unit-value index numbers, and import-export price statistics.

1. Money, Banking, and Finance. Compilation of Government receipts, disbursements, cash holdings, and public debt. Assistance in development of Balance of Payments statistics.

m. National Accounts. Initiation of a continuing programme for estimating national income and product.

BANK OF SIERRA LEONE
RESEARCH DEPARTMENT

As financial adviser to the Government, the Bank of Sierra Leone must be as fully informed as possible about economic and financial developments affecting the country. A Research Department has, therefore, been established with responsibility for collecting, compiling, analysing and publishing statistical data covering a very wide range of subjects which influence the domestic economy. A certain amount of study is also undertaken concerning economic and financial developments in other countries, particularly those which have trade relations with Sierra Leone.

A series of statistical tables have been or are being drawn up by the Department covering short-term money movements, currency circulation and the volume of money, banking statistics including a combined statement of assets and liabilities of the commercial banks, interest rates, loans and advances, daily clearings of cheques through the Freetown Clearing House, savings, employment, prices and wages, and trade figures. In addition, the Department has completed a preliminary balance of payments survey and is engaged on the improvement and expansion of balance of payments estimates. Returns are also produced on changes in external reserves, Government receipts and expenditure, development expenditure, foreign debt tables, capital movements and foreign investment in Sierra Leone.

As well as preparing an economic review for inclusion in the Bank's annual report, the Research Department is also responsible for producing and editing a Quarterly Statistical Review, published by the Bank, a monthly Bulletin of Statistics, a monthly report on economic developments for the Board and a weekly News Review.

As a member of the International Monetary Fund, Sierra Leone is required to provide the Fund at regular intervals with statistical information about balance of payments, trade figures and holdings of foreign currencies. As the designated fiscal agent for the Government, the Bank is called upon to provide the necessary details and the Research Department are responsible for collecting and co-ordinating the various returns. The Research Department also operates the Bank's reference library.

Organization

The Research Department is headed by a Director of Research, with an Assistant Director of Research and a Manager. It is divided into five divisions:

Balance of Payments: External trade, Invisibles, Capital Account, External Reserves, Foreign Debt, International Institutions.

Banking: Banking Statistics, Banking Developments, Money Supply, Monetary Research.

Domestic Economy: Employment, Wages, Prices, Cost-of-living, Population; Government Accounts; Agricultural Production; Retail and Wholesale Trade; General.

Statistics.

Library.

Staff Training

In order to carry out its analysis and interpretation of information gathered, the Research Department must have a highly skilled and experienced staff. A continuous training programme has been in operation since the inception of the Department in the middle of 1964. Some members of the staff have attended specialized courses abroad under the guidance of the Director of Research, who has been made available under a technical assistance programme instituted by the I.M.F. Additional training is necessary and more professionally qualified staff are needed to enable the Department to fulfill its obligations.

The Department's future plans are to increase the scope of its activities and improve the foundation that has been laid. Thus, in due course, the Department intends to publish monthly a statistical review of up-to-date information of all aspects of the economy of Sierra Leone. The Department also intends to undertake research on some of the unexplored parts of the domestic economy. The calculation of the national income and product, cost-of-living indices for different income groups, a more scientific and realistic basis of calculating invisible earnings and expenditure, a half-yearly balance of payments calculation, and methods of improving the coverage of current statisticiical data, are some of the research work now being embarked upon by the Department.

SURVEYS AND LANDS

The Surveys and Lands Division in the Ministry of Lands, Mines and Labour is the Government agency concerned with the mapping of Sierra Leone as well as with land acquisition matters.

Mapping. The mapping programme of Sierra Leone is well advanced. It is based on complete ground triangulation of the country as well as on an aerial survey accomplished 1948-64 and the subsequent field work arising out of this photography.

1:50,000. The first edition of some 57 sheets at scale 1:50,000, covering the western half of the country, have now been published. The remaining 54 sheets in the series are expected to be published by 1967. The second edition of this map series will show contours. Field parties currently engaged in the altimetric programme are expecting to complete their work by mid-1966. A linguist will check place names. The complete second edition should be published by 1971.

1:2,500. Town plans at scale 1:2,500 are being prepared of 11 cities and towns in Sierra Leone. These are based on low level photography and subsequent field work. These town plans are in various stages of preparation. Bo has been published. Kenema and Makeni will be published in 1966. Town plans of Pujehun, Kailahun, Moyamba, Port Loko, Kabala, Kambia, Sefadu and a new series on Freetown will appear, in this order, during the Plan period.

The Directorate of Overseas Surveys under U. K. Technical Assistance is assisting with the preparation of these two map series, with Government paying 15% of the aerial and field survey cost.

1:250,000. Basic material gathered in the course of preparing the 1:50,000 map series will be passed to the U. S. Army Map Service which will produce at its expense a new edition of the 1:250,000 map series by 1970.

Levelling. The Directorate of Overseas Surveys has agreed to continue its field party of 3 surveyors, which is completing the altimetric programme, on to 1971 to accomplish a precise levelling framework for Sierra Leone.

Lithographic Printing Press. Since the country has no method of map reproduction, it is desirable that a lithographic press be obtained.

Land Matters. A Land Tenure Expert should be obtained to prepare a land manual. After this has been completed, a Legal Draftsman would be required to codify the data collected. Then a Land Registration expert in 1970 could start a registration system to record the ownership of land.

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A. BASIC INFORMATION CHAPTER (Con'd)

- 8 DEC 1965

LABOUR STATISTICS

The Labour Division of the Ministry of Lands, Mines and Labour set up a Statistical Section in 1962 with the object of centralising the collection, compilation, and publication of statistics of employment, weekly earnings and hours actually worked, Freetown index of consumer prices and unemployment.

The Section's staff is assisted by Labour Officers and Factories Inspectors in the Northern and Eastern Provinces who collect data on employment and prices. This statistical information, following processing, is published in the Labour Division's Annual Report, the weekly Sierra Leone Gazette, the Central Statistics Office's Quarterly Bulletin, and the International Labour Office's publications.

Programme

It is planned to commence publication of a quarterly report on average weekly earnings and hours worked in certain industries. Possibly a selected series of unemployment statistics and consumer prices indices will be published in a quarterly or half-yearly bulletin. A household income and expenditure survey is due to be carried out in 1971 or possibly earlier in order to revise the weights of the existing indices. The Statistical Section will continue to effect improvements in the content and presentation of labour statistics. Based on a survey now underway, a National Provident Fund Scheme may be started in 1966; it would be administered by the Statistical Section.

Staff Training

All the agencies engaged in the collection and preparation of basic information will require additional professional and technical personnel to carry out their proposed programmes during the Plan period. Personnel will be given in-service training locally as well as professional level training abroad. It is planned to enlarge the Survey School in order that it can train 24-30 students at a time in surveys and lands matters including surveyors and draftsmen for all Government departments.

Staff Requirements for Basic Information Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Central Statistics Office			
Ld of Sierra Leone Research Dept.			
Lands and Surveys Division			
Staff Surveyor			
Surveyor			
Junior Surveyor			
Cartographical Draughtsmen			
Computer			
Lands Officer			
Land Registration Officer			
Lithographer	0	6	6
Compositor	0	1	1
Guillotine operator	0	1	1
Superintendent of Training			
Assistant Superintendent of Training	0	2	2
Labour Division			

Classification of Personnel	Present Staff availabilities	To be Trained	1971 Staff Requirements
Labour Division			

Proposed Plan Expenditure on Basic Information

In Leones

Project	1966-67	1967-68	1968-69	1969-70	1970-71	Total
CSO						
Equipment						
Surveys and Lands						
Levelling equipment	4,000					4,000
Lithographic Printing Press	56,000	40,000	25,800			121,800

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

Agriculture Section goes here

11 NOV 1965

II B. AGRICULTURAL DEVELOPMENT (Cont'd)

VETERINARY

Sierra Leone's cattle population is estimated at 250,000 heads. The numbers are on the decline because of disease control measures which have been applied over the years by the Veterinary Division of the Ministry of Agriculture and Natural Resources. Poultry production has recently been started on a large scale.

Objectives

Government's programme for livestock development has the following objectives:

1. To improve health standards of domestic livestock.
2. To carry out research activities into all diseases affecting livestock.
3. To improve the quality and quantity of meat produced.
4. To establish a milk supply scheme.
5. To provide clinical facilities for large and small animals in all centres of the country.
6. To install a quarantine station.
7. To start local in-service training facilities for junior veterinary staff.

Action

1. Veterinary preventive medicine. The Veterinary Division plans to expand its preventive medicine activities for all productive livestock including cattle, sheep, goats, poultry, and pigs. Teams will continue to be sent out to vaccinate cattle against the more common epizootic diseases. Sierra Leone will

participate in the CAV/RNLC campaign against rinderpest which is being financed by USAID and U.K.

2. Veterinary Officer Stations. In addition to the Veterinary Officer Stations currently in operation at Freetown, Kabala, Yonema, and Pujehun, it is planned to open stations at Bo, Bonthe, Port Loko, and Kenema. These stations provide preventive and clinical services and investigate diseases.

3. Livestock Improvement Farms. There are presently 23 posts functioning to breed livestock, and it is planned to establish 9 additional posts.

4. Small Animal Clinics. In view of the valuable role played by the Freetown clinic, it is planned to establish a small animal clinic at each Veterinary Station.

5. Veterinary Animal Institute. The central research laboratory at Tobi near Kenema is to be expanded to conduct research on all diseases affecting livestock. This will involve acquisition of research and laboratory staff.

6. National Abattoir. Surveys are underway to determine the capacity and location of a national abattoir.

7. Quarantine Station. A station is to be established in Freetown to quarantine and observe all species of animals entering and leaving Sierra Leone, thereby preventing the import and export of diseases.

[illegible]

To create this [illegible] the Veterinary Physician's staff will have to be considerably enlarged.

[illegible]

Classification of [illegible]	[illegible]	[illegible]	[illegible]
Professional level			
[illegible]	4		
[illegible]	0		
Sub-professional level			
[illegible]	1	3	4
[illegible]			
[illegible]			
[illegible]	0	0	0
[illegible]			

Veterinary

Percentage Distribution of Veterinarians in Colorado

Status	1969	1970-75	1976-80	1981-85	1986-90	Total
Voluntary preventive clinic						
Voluntary collection facility						
Voluntary inspection facility						
Meat hygiene duties						
Voluntary research facility						
Retired practice						
Current status						

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23 NOV 1965

II. B. AGRICULTURAL DEVELOPMENT CHAPTER (Con'd)

F O R E S T R Y

The greater part of Sierra Leone's timber-bearing forests have long been cleared for farming. Since the establishment of the Forestry Department in 1911 it has managed to build up protected forest reserves of more than 1,000 square miles or about 4% of the country. This has been accomplished partly by setting aside forest areas, partly by planting old farmland.

The present rate of logging is estimated at 650,000 cubic feet per year. It is believed that during the Plan period this can be increased to 1,000,000 cubic feet from present reserves and another 750,000 cubic feet from new reserves being demarcated. Present output is all consumed in Sierra Leone, partly as pitprops and housing timber, and partly by sawmills for further treatment. There is a Government sawmill, the Forest Industries Corporation at Kenema, where production of sawn timber has been combined with prefabrication of wooden buildings and with the manufacture of furniture mainly for the local market. There is also a private sawmill at Panguma.

F O R E S T R Y

Objectives

1. To reserve permanently for the benefit of the people sufficient forest land for the maintenance of the climatic and physical condition of the country, the safeguarding of water supplies and soil fertility, and the prevention of flooding and erosion as well as for the perpetual supply of the timber products required by the people for agricultural, domestic, and industrial purposes.
2. To develop the rubber industry on Government estates and to encourage and assist the people in the production of rubber for export.
3. To ensure the preservation and rational utilization of wildlife and its habitat.

Targets and Strategy

1. To acquire and reserve additional land for foresting, the existing 1,187 square miles of forest reserves and protected forests to be increased to 2,817 square miles, thereby raising from 4 to 10% the land area of the country devoted to forest.
2. To develop an integrated timber and wood industry in the country increasing annual logging from 650,000 to 800,000 cubic feet and sawmilling from 900,000 to 1,750,000 cubic feet.
3. To continue surveys, pilot projects and land acquisition and planting, leading to the expansion of the rubber industry from the 2,100 acres planted at present to estates totaling 46,000 acres.
4. To further wildlife conservation by demarcating and acquiring areas for game preserves and national parks.

F O R E S T R Y

Programme

The development programme of the Forestry Division is divded into three parts:

A. Forest Conservation and Exploitation

1. Forest Reservation. Government is following a policy of acquiring and reserving land for foresting. The present area of land under forest management is grossly inadequate to meet the timber needs of the country in the next 40 years. The goal therefore is to increase the present 1,187 square miles of forest reserves and protected forests to 2,817 square miles. Fifteen possible forest reservation sites in the country are programmed for reconnaissance, demarcation, survey, and acquisition. Compensation will be paid for some of the land acquired while in other cases the land will be provided by the local people without compensation.

2. Forest Management.

3. Forest Research is to be conducted under a programme to be examined and approved by a Forest Research Board soon to be established.

4. Timber Felling and Regeneration.

5. Savannah Afforestation.

6. Sawmilling. Portable sawmills (of around 300,000 cubic feet annual in-put) are to be acquired to bring under exploitation the isolated, small but rich forest reserves which, because of their remoteness, are not accessible to the existing large sawmills in the country. It is aimed to have at least one such sawmill in each Province. One mobile mill is already in operation at Kasewe Forest. At least two more such sawmills are being obtained.

7. Processing Industries. Projects to be surveyed and executed by private enterprise or jointly with Government include:

a. Timber impregnation plant.
b. Broom and brush making factory.
c. Match making factory.
d. Chip-board factory.
e. Development of Bees Wax industry.

B. Rubber Development. Pilot rubber growing schemes have been underway in Southern Province for some years. Three Government rubber estates totalling 71.53 square miles in area have been established.

ACREAGE PLANTED IN RUBBER

	1964	1965	1971
Government estates	600	1,500	46,000
Private estates	349	600	4,000
Total	949	2,100	50,000

C. Wildlife Conservation. A programme is being launched to demarcate and survey areas proposed for national parks and game reserves. Legislation is being prepared covering all aspects of wildlife conservation.

F O R E S T R Y

Staff Training

To execute this programme the Forestry Division's staff will have to be considerably enlarged. It is planned to establish a Rangers School to train Forest Guards and Rangers.

Staff Training Requirements for Forestry Personnel

Classification of Personnal	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Forestry Staff			
Chief Forestry Officer			
Forester			
Assistant Forester			
Forest Supervisor			
Forest Surveyor			
Senior Forest Ranger			
Forest Ranger			
Senior Forest Guard			
Forest Guard			
Tree Spotter			
Chief Conservator of Forests			
Conservator of Forests			
Senior Assistant Conservator			
Assistant Conservator			
Forest Research Officer			
Laboratory Technician			
Rubber Development Staff			
Rubber Development Officer			
Wildlife Conservation Staff			

Proposed Forestry Development Expenditure

In Leones

Project	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Forest Conservation & Exploitation:						
Land acquisition						
Reforestation of land acquired						
Savannah Afforestation						
Sawmilling						
Forest Research Centre						
Establishment of Rangers School						
Processing Industries						
Timber impregnation						
Broom & brush making						
Match making						
Chip-board						
Bees Wax						
Village Woodlot Schemes						
Rubber Development						
Land acquisition						
Planting						
Wildlife Conservation						
Land acquisition						

SIERRA LEONE 1965 NOV 19 PM 1 MF

19 NOV 1965

(cont'd)

T E L E G R A M

...ern and inland fisheries develop, and will increase ...ation diet for the population, will provide productive em...-ment and trade, and will offer export products to earn foreign exchange.

Broad estimates based on fish landings and on population and market surveys done in 1963 show that total production of fish in Sierra Leone is approximately 25,000 tons, of which 9,000 tons is caught by foreign enterprises and 6,000 tons of that is exported (tuna). Imports, coming from Europe and Japan plus fish caught offshore by foreign nationals, amount to 6,000 tons, so that consumption of fish may be put at around 31,000 tons per annum, or an average of nearly 30 pounds per head per year, but unevenly distributed.

Previous research indicates that the exploitation for increased fish production in Sierra Leone are good. In-shore fishing potentialities are nearly at limited, but prospects for off-shore fishing are optimistic.

The problems of exploiting production are:

1. Low level recruitment, leading to low productivity and ill-fed initiative and therefore slow development. This in turn results in limited incentives and low level recruitment.
2. Conservatism of the traditional fisherman in his ancient craft, although this is far less pronounced in Sierra Leone than in other crafts and in other countries.
3. Limitation in size and productivity of easily accessible fishing grounds.

4. Limitation in size, range, and efficiency of locally-built boats.
5. Limitations in trade outlets for the primary producers. The present individualistic method of marketing and lack of facilities discourages effort.
6. Shortage of efficient preservation facilities. The buyer has the advantage over the fisherman because his product is perishable.
7. Shortage of capital and know-how to develop mechanized fishing rapidly. Foreign enterprise must be encouraged but will compete so seriously with the less efficient indigenous fishermen that they must be protected.
8. Reduced employment for traders and transporters will result from improvements in preservation, distribution, and processing. Larger catches will eventually reabsorb this displaced group, but the interim period will be difficult.

FISHERIES

Objectives, Targets, and Strategy

Objectives. Fisheries development has the following main objectives:

1. Increased production of food.

2. Improved nutrition, through increasing consumption of protein- and calcium-rich fish. Nutrition benefits will result in a healthier population (particularly children, who suffer most from protein and calcium deficiencies) with more energy and stamina to put into production, increased life expectancy, and reduced demands for health services.

3. Increased production of exportable products, earning foreign exchange and reducing need for imports.

Targets. It is expected that motorization and other developments will raise productivity per individual from about 1.8 tons per year to nearly 3 tons. Because unpowered vessels will be replaced by motor vessels, this increased production will not require any significant change in total manpower. Thus the 21,000 full- and part-time producers (equivalent to an estimated 25,000 full-time fishermen) will increase only slightly to produce 45,000 tons of fish per year.

Fisheries Production Targets

	1965-66			1971		
	Number	Weight of Fish Caught (tons)	Value in Crores	Number	Weight of Fish Caught (tons)	Value in Crores
Inshore Vessels						
Non-powered	2,750	27,000	1,350,000	2,400	35,000	2,325,000
Outboard motor boats	240	1,000	185,000	700	8,000	750,000
Inboard motor boats	6	65	5,500	30	500	45,000
Offshore Vessels						
Trawlers	16	2,300	200,000	25	4,000	510,000
Liners	3	30	1,000	15	6,500	500,000
Mech.Vessels	60	6,500	1,100,000	70	10,000	1,700,000
Oyster Fishery	-	5	100	-	500	70,000
Fishfarming, etc.	8 acres	nil	nil	24 acres	100	10,000
Total Fish Production		28,000	2,914,000		45,500	4,900,000
Less Exports'		6,500	1,100,000		10,500	1,450,000
Fish Imports						
Fresh & Frozen		4,000	550,000		1,000	150,000
Dried & smoked		700	72,000		-	-
Canned, etc.		1,000	300,000		500	250,000
Fish Consumption		28,700	2,910,000		36,000	3,850,000

Strategy. Fisheries development during the Plan period should be concentrated on increasing training and extension work (accompanied by research); on increasing credit facilities; on improvements in and expansion of preservation, marketing, and storage facilities; and on improvement and expansion of boatbuilding.

In addition, work should be done in developing inland fish culture, shellfish culture (oysters, shrimp), and estuarine fish culture in mangrove swamps. Older preservation techniques should be thoroughly studied. Deepsea sardine and tuna fishing and training should be studied thoroughly and effective methods of stock conservation undertaken.

F I S H E R I E S

Importance

A number of fisheries projects are already underway. These include a national fisheries survey and census, freshwater and estuarine fisheries experiments, loan schemes, establishment of fisheries stations in coastal towns, and studies of fish preservation and distribution techniques. These should all be continued.

During the Plan period the national fisheries survey should be continued and maintained up-to-date, in order to assess the existing situation, potential and needs for development.

In addition, the following 11 projects should be undertaken during the Plan period:

1. Training. Although skilled in traditional fishing methods, rural fishermen cannot hope to improve their catch significantly without new techniques, modern boats and modern gear which they will have to learn to use. The envisaged training program is phased in three parts at three levels of training:

a. Primary or trade school level for vocational training will require 2, possibly more, trade schools (1 in Freetown, 1 in Shenge), with classrooms, workshops, and equipment. For the Freetown school most of the needed facilities are already in existence in Kissy, and only equipment would be needed. These schools should be started as soon as possible.

b. Secondary, from Form IV on specialization for entry into sub-managerial and leadership posts. 2 or more secondary schools are needed, specializing in fisheries, and should be established in 1969 to accept students in 1970.

c. Higher education for administrative and managerial personnel should be planned during this Plan period, possibly

on a regional basis to serve several countries where national demand is insufficient to justify a unilateral undertaking. A department or faculty of fisheries within the framework of Njala University College should be projected for about 1972.

2. Extension and Mechanization are necessary to extend knowledge of modern fishing techniques and equipment to all rural areas. As bases for this work, Fisheries Stations will be required in each coastal district. The eventual aim is to have full stations at Pyehon, Jungi, Freetown, Kent, Shenge, Bonthe, and Sulima, with extension sub-stations (more urgently required and cheaper and easier to establish) at Kolibuya, Plantain Island, Dolhun, Donga, and Pasa. Inland extension should be based at Kusaia and Kenema.

Four main stations and two sub-stations are planned for this Plan period. (Bonthe Station and Kent and Shenge sub-stations are now open.) Shenge Station is urgently required for 1966. Kolibuya sub-station should follow in 1967-68, together with Kusaia fishculture station. In 1968-69 Jungi and possibly Kenema freshwater stations should open, and in 1969-70 Pyehon and perhaps Hastings. These stations will also become local centres for the operation of the fisheries loan scheme which constitutes an integral part of the planned agricultural loan scheme.

3. Resource Appraisal. It is essential to examine the potential fisheries resources in order to plan their exploitation. There are two major survey projects planned: one for surface (pelagic) fish, and one for demersal, from the sea bottom. The Sardine Survey should coincide with the general West African Sardine Survey, beginning in 1966 and lasting 5 years. The Trawling Survey, based on the results of the GCFA (now OAU) Guinean Trawling Survey, should take 3 years, but cannot start before 1969 when sufficient men are trained.

4. Protection and Control measures are necessary to ensure continuance of exploitable fish stocks and maintain these at an optimum by (a) analysis of catches and estimation of stocks, (b) regulation of national fishing, and (c) protection from foreign intrusion in our territorial waters. Laboratories and statistical analytical facilities are already in existence at Lacy, and one vessel is partly used for protection. The experimental work will later become part of the proposed Marine Resources Research Institute.

A fleet of at least 4 high-speed, lightly-armed vessels is needed, serving a joint function of fisheries protection and air-sea rescue. They should arrive 1 yearly 1968-72, to be operated by the a Naval Force.

5. Research Institute. A Marine Resources Research Institute is needed to study the productivity of the sea and seek to increase it. It will examine problems arising from developing fisheries production and search for new resources such as plankton, seaweed, etc. A Director for such an Institute is expected by Fourah Bay College this year, and he should prepare a detailed plan for the Institute's development. It is hoped to begin work on the new site in 1967 and begin research programmes in 1969. The overall plan of research will, however, begin in 1966.

6. Fish Preservation, Marketing, and Distribution.

Processing:

a. Smoking -- The present open fire system of smoking is inefficient and wasteful. Experiments were started in 1963 in the use of enclosed kilns and the first ones are now in use. They should be extended to achieve universal acceptance by 1970.

b. Freezing -- Although more expensive, freezing results in a better quality product. The 5 existing coldstores, run by private entrepreneurs, need foreign equipment and specialized transport. Increased catches will require expansion, and some Government help is needed.

c. Fish Concentrate -- Mackerel or fishflour is a cheap, light, palatable form of processing small fish for both human and animal consumption. Although Sierra Leone is not likely to produce sufficient cheap fish for animal consumption, she can benefit by producing fishflour for distant, low-income consumers. A small plant should be started in 1970-(3) as a co-operative venture, and should become self-supporting in one year.

d. Canning -- is a very expensive method of preserving fish and is practicable only on a fairly large scale. However, it is the most convenient form of packaging if local stocks are shown in their resource appraisals to be sufficient to warrant a viable cannery (of say 20 tons per day). Plans should be made to start a cannery about 1980, to be running commercially 10 months later.

e. Experiments should be conducted in preserving with antibiotics and modern techniques such as osmosis and vacuum freeze drying, to determine their economic potential.

Marketing: The existing traditional, inefficient methods of marketing fish are inefficient, slow, unhygienic, and therefore both expensive and dangerous to the consumer. Improvements are needed in marketing facilities such as simple concrete buildings, an efficient water supply, and trailers for transport. At least 6 markets should be completed during the Plan period, 2 in Freetown and 4 in the major provincial centres. Such markets have already been begun in Freetown and Bonthe. These should lead the way to full scale development of wholesale marketing, with the 6 markets complete by 1971.

7. Estuarine Fisheries. Oyster culture should be established as early as possible to utilize the excellent habitat for oysters in the estuaries of Sierra Leone. These estuaries can also offer industry in shrimp culture, which could utilize mangrove swamp

which is otherwise useless and add to production for both home consumption and export. Eventually the principal of extensive fish culture in mangrove swamps, known as TAMBAK fisheries, might be attempted.

8. Tuna Fishing. The tuna industry is already established, but as an almost entirely foreign operation. It is here and with smaller pelagic species that the greatest potential lies, and Sierra Leone fishermen should be sharing in this enterprise.

9. Boatbuilding. As fishermen become skilled in modern techniques, they will need larger, powered vessels to fish further afield and more efficiently. A boatbuilding scheme should be undertaken, utilising local timber and ancient skills.

10. Freshwater Fishery. Fish culture inland could ease dietary protein deficiencies and diversify the limited agriculture, offering additional employment in rural areas. Although freshwater fishery will not in the foreseeable future completely meet the demand for fish in inland areas, it may add considerably to up-country diet.

11. Sport Fishing is an excellent attraction for tourism. Although not a necessity, the game fishing potential in Sierra Leone waters should be studied as a potential tourist attraction. Early trials by enthusiastic amateurs should be assisted by subsidising boat and trips on fisheries patrol vessels. If encouraging reports are returned, a professional game fisherman with a high-powered seagoing fishing vessel should be based on the Aberdeen Hotel.

F I S H E R I E S

22 NOV 1965

Staff Training

In-service training and scholarships abroad have been included in individual development projects.

General service staff receive training and promotion in one of five major fields: Extension, Fishing, Engineering, Boatbuilding, and Biology.

Professional officers are trained overseas for a year after a year's post-graduate in-service training.

A Principal Fisheries Officer is in charge of the overall planning and administration of staff training as well as the national training programme in fisheries.

22 NOV 1965

Staff Requirements for Proposed Fisheries Projects

	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Training			
Primary vocational training	-	10	10
Secondary school training	-	4	4
Extension and Mechanization			
Professional	2	6	8
Subprofessional	7	11	18
Protection and Control			
Professional	1	4	5
Subprofessional	8	16	24
Statistician	-	1	1
Research Institute			
Scientists	-	4	4
Subprofessional	-	6	6
Fish Preservation			
Smoking			
Professional	1	-	1
Subprofessional	4	-	4
Freezing			
Professional	-	4	4
Subprofessional	-	12	12
Canning			
Manager	-	1	1
Secretary	-	1	1
Subprofessional	-	16	16
Fish Marketing			
Managerial	-	7	7
Subprofessional	10	10	15
Artisans		13	18
Shellfish Culture			
Professional	-	2	2
Subprofessional	-	6	6
Trawling			
Professional	-	12	12
Subprofessional	-	26	26
Sardine Survey			
Professional	2	5	7
Subprofessional	4	4	8
Semiskilled	-	30	30

(Staff Requirements - Con'd)	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Tuna Fishing	-	72	72
Boatbuilding	-	22	22
Freshwater Fisheries	2	10	12
Sport Fishing			
Professional game fisherman	-	1	1
Subprofessional crewmen	-	4	4

22 NOV 1965

Proposed Fisheries Development Expenditure

In Leones

	1966-67	1967-68	1968-69	1969-70	1970-71	Total
National Survey	200	300	500	500	500	2,000
Loans & Credit Scheme (See Agricultural Credit Scheme)						
Training						
Primary	12,400	87,600	100,000			200,000
Secondary				70,000	50,000	120,000
Extension (Fishing Centres)	12,000	18,000	20,000	20,000	10,000	80,000
Protection & Control			20,000	50,000	50,000	120,000
Research Institute	10,000	21,000	30,000	30,000	40,000	131,000
Fish Preservation & Marketing						
Processing						
Smoking	400	2,100	2,500	2,500		7,500
Cold Storage	60,000	10,000	50,000	170,000	110,000	400,000
Fish Concentrate			10,000	26,000		36,000
Canning			40,000	60,000		100,000
Marketing & Distr'n	10,000	20,000	30,000	70,000	140,000	270,000
Estuarine Fish Culture						
Oyster Culture	3,000	13,000	18,000			34,000
Shrimp Culture		6,000	14,000	20,000	10,000	50,000
Tambak Fishery				20,000	80,000	100,000
Trawling Development			120,000	240,000	500,000	860,000
Marine Stock Appraisal	26,500	93,000	164,000	154,000	130,000	567,500
Tuna Fishing	20,000	20,000	20,000	31,000	63,000	154,000
Boatbuilding	8,000	40,000	110,000			158,000
Freshwater Fishery	4,000	12,000	18,000	20,000	20,000	74,000
Sport Fishing	1,000	1,000	20,000	40,000	20,000	82,000
Total	167,500	344,000	787,000	1,024,000	1,223,500	3,546,000

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

AGRICULTURE CHAPTER goes here

30 SEP 1965

II C. WATER RESOURCES CHAPTER

Objectives and Strategy

Objectives. The main objectives of the Five Year Plan are to develop Sierra Leone's water resources as an integral part of the basic social and economic infrastructure necessary for the nation's development by:

a. Commencing a long-term programme for the survey of the totality of the country's water resources.

b. Providing urban water supplies.

c. Providing rural water supplies.

d. Providing and controlling such health aspects of social development as urban sewerage and garbage disposal schemes.

e. Executing land drainage, irrigation, coastline protection, hydroelectric power, and other engineering schemes.

Strategy.

1. To sustain the Water Resources Survey, with a view to assessing the total water availabilities from ground and surface sources.

2. To establish a Water Resources Organisation in the Ministry of Works to collate the basic survey data and to determine future development programmes.

3. To complete the 34 urban water supply projects under way and to expand village water supplies through the rural works development programme.

4. To initiate urban sewerage and improve upon existing garbage disposal schemes.

5. To execute engineering projects in the fields of land drainage, irrigation, coastline protection, hydroelectric power, and the like.

Programme

1. Survey. The scope of the Water Resources Survey, already in its first phase, will cover and assessment of the total available from ground and surface water sources with a view to determining the economic feasibility of programmes connected with power development, Rural and Urban Water Supply Schemes, soil conservation, irrigation, drainage and agricultural land reclamation. One fringe benefit of the work under the programme may well be improvements in the navigability of some of our inland waterways.

2. Water Resources Organisation. The principal concern in this period will be the establishment within the Ministry of Works of an organisation, staffed so far as is practicable by trained Sierra Leoneans, to assemble, collate, and interpret basic data connected with the water resources of Sierra Leone.

The first two years of the Five Year Plan period will be occupied in setting up the Water Resources Organisation, installing rain and river gauges and attempting all the co-relation possible between records so far collected by various agencies and those to be collected in the newly built stations.

The selection, location, intensity of stations and the assembly and presentation of records will, as far as is possible, be planned to be in the first place in consonance with the development needs of Sierra Leone, and in the second place appropriate to the requirements of the UNESCO- sponsored hydrological decade planned to start in 1965.

By the third year of the programme, enough information would have been assembled to enable preliminary designs, feasibility and comparative studies of particular projects to be made and detailed designs for some schemes of high priority to be completed by the end of the fifth year. Estimates of expenditure for this survey are given in the table at the end of the chapter.

3. Urban Water Supplies. Within the five year period all Urban Water supply schemes at present designed, or included in the present contractor-financed schemes, should be completed.

Group I -- Contractor-Financed Projects

1. Batkam and Matobo
2. Bhama
3. Bontho
4. Buodu
5. Changbatoke
6. Dixey Chagbo
7. Kandado
8. Kasiri/Kyeboa/Kiampidi
9. Kaweli
10. Kumbolo
11. Nano
12. Nattru
13. Pendembu
14. Potoru and Kondowahun
15. Rotifunk
16. Segbwema
17. Songo
18. Sumbuya
19. Tikun
20. Yengema

Group II -- Ministry of Works Direct Labour Projects

1.	Jaiama Wandikoro	Estimate Le. 60,000
2.	Kabala	450,000
3.	Kailahun Extension	120,000
4.	Kambia Extension	80,000
5.	Kenema Extension	400,000
6.	Koidu New Scheme	720,000
7.	Koyiema Extension	40,000
8.	Lunsi New Scheme	400,000
9.	Lunsar Extension	60,000
10.	Magburaka Extension	70,000
11.	Port Loko Extension	120,000
12.	Rokupr Extension	80,000
13.	Serabehun New Scheme	120,000

The work outlined above gives a safe working target for the staff which can be recruited and trained within the Ministry of Works in the design and supervision of construction of Urban Water Supply Schemes. Should further schemes be envisaged within the period, special staff must be recruited to liaise in the design and construction with Consulting Engineers.

11 DEC 1965

C. WATER RESOURCES CHAPTER (Con'd)

Guma Valley Water Company. Water is piped to the Freetown area from a system of mountain catchments lying to the south of the city. In 1961 authority for the Freetown water supply was vested in the Guma Valley Water Company, a Government Corporation. It is completing in 1966 the Guma Valley Dam which will impound 4,800,000,000 gallons of water. The treatment works nearby and the 22", 15-mile trunk water main to Freetown have an initial capacity of 6,000,000 gallons per day. The Company proposes to initiate three projects during the Plan period:

a. Duplication and Improvement to Guma Trunk Main. It is planned to lay a new 26" main from Guma to Freetown with a daily capacity of 13,000,000 gallons and to improve the existing main.

b. High Level Treatment Works. With water supplied from the Kongo Dam, a treatment works will be established at Regent to provide water to the mountain villages, Fourah Bay College, Hill Station and Wilberforce -- areas at too high an elevation to be served from the Guma Scheme.

c. Extension of Distribution System. Continuing work will be done to improve and extend water mains within the Company's present limits of supply.

4. Rural Water Supplies. Following on the results of the experiment in co-operation between the Ministry of Works, CARE, and the U. S. Peace Corps on Village Water Supplies, three rural water supply units are to be set up, one per province. These units, manned by Peace Corps volunteers, will work with village personnel in developing water supplies.

5. Urban Sewerage and Garbage Disposal Schemes. Government has accepted the inadequacy of the existing provision for both sewerage and garbage sanitation in Freetown, and the conditions at Bo are equally inadequate and unsatisfactory.

The first two year period of the Plan will be spent in collecting basic data related to sewerage and garbage disposal schemes for the two cities, and final design should have commenced in the fourth year.

6. Other Engineering Works.

Main Drainage. Government has long recognised the need for a major project to provide satisfactory main drainage works for the Freetown Area. Consulting Engineers were commissioned in 1959 to examine and make proposals for the project. Their preliminary report and estimates have been submitted to Government. The Engineers should be commissioned in the third year of the present Five Year Plan to commence detailed design.

Coastline Protection. Continued large scale erosion by both wave and surface water action around the Freetown and York Island foreshore endangering both life and property has caused Government considerable concern over the past six years. Designs for protective works have been completed, and it is planned to commence work in the second year of the Plan.

Staff Training of Water Resources Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Professional Staff			
Engineer, Water Resources		3	3
Sewerage & Sanitation		3	3
Docks, Harbours & Sea Defences		3	3
Technical Staff			
Water Supply Maintenance	30		30
Water Supply Equipment Maintenance	11		11
Drawing Office - Water	8		8
Hydrometrist	4		4
Data Processor	4		4

Proposed Plan Expenditure on Water Resource Development

In Leones

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Total
Water Survey	1,000	83,000	22,000	156,000	152,000	414,000
Water Resources Org.						
Urban Water Supplies:						
Group I*	700,000	1,600,000	1,500,000	1,500,000	500,000	5,800,000
Group II		800,000	600,000	620,000	700,000	2,720,000
Guma Valley Water Co:						
Guma Trunk Main	10,000	600,000	600,000			1,210,000
High Level Treatment Works		100,000	100,000			200,000
Extension of Distribution System	50,000	50,000	50,000	50,000	50,000	250,000
Rural Water Supplies	10,000	40,000	60,000	60,000	60,000	230,000
Urban Sewage & Garbage Disposal		32,000	32,000	310,000	310,000	684,000
Other Engineering Works	n.a.					
Total	771,000	3,305,000	2,964,000	2,696,000	1,772,000	11,508,000

*Financed under Suppliers Credits

Sources: Ministry of Works
Guma Valley Water Company

18 NOV 1965

II. D. ELECTRIC POWER CHAPTER

In Sierra Leone, as in other developing countries, power is perhaps the most essential requirement for advancement; but it must not absorb too high a proportion of the available capital resources, particularly as a large proportion of this expenditure invariably involves foreign exchange.

As a country develops, its energy requirements rise, and the total at each stage can be forecast with a certain degree of accuracy. How these requirements can best be met is a more open question. Urban life could develop as in the past without electricity, but electricity is very desirable and even essential if the rate of development is to be accelerated. Manufacturing industries, save in the most rudimentary form, can only exist if there is electricity. In agricultural areas, electricity is a convenience, but is by no means essential until the processing of agricultural products is undertaken.

Objectives

The overall objective of the Sierra Leone Electricity Corporation (the authority responsible for the planning, development, and operation of all public electricity supplies in Sierra Leone) is to cover the whole country with supply networks as fast as funds, material, and human resources of trained personnel permit.

This objective is to be realised in two major phases. First, the expansion and consolidation of supplies in areas where facilities already exist in order to develop demand to a near economic level. Second, replacement of the numerous

unconnected small Diesel Stations now scattered all over the country with centralised generating stations at selected key points and then covering the areas to be served with major interconnecting transmission and distribution networks.

In this regard, the possibility of eventually exploiting the hydroelectric potential of either the Bumbuna Falls or the Mange, capable of producing 80,000 and 32,000 kilowatts respectively, is being actively considered as well as the construction of grid lines to transmit the power from point of generation to areas of utilisation. In the third stage (after 1971), any one of such major generating stations will be interconnected to the Western Area major Power Station at Kingtom, Freetown.

Strategy

The implementation of most of the projects enumerated below is long overdue, principally because of shortage of funds rather than lack of interest in the programmes. Unless action is taken promptly, the price of power will remain unduly high and the purpose for which this utility service was established will be defeated. Nor will the Sierra Leone Electricity Corporation be able to reach all its potential consumers and thereby play its role in raising the standard of living of the people as well as contributing to national development.

Hence, Government participation in most of the provincial projects is a necessity if the price of electricity to the consumer is to be kept at a realistic level, particularly when the selling price is to be kept uniform for all areas of utilisation in spite of widely varying generating costs throughout the country.

Targets and Programme

PHASE I -- Expansion and Consolidation of Existing Electricity Supplies

WESTERN AREA:

1. It is intended to start work in 1966-67 on the installation of the third Diesel Unit (approximate capacity 9,000 KW) at Kingtom Power Station, Freetown.

2. Commence actual operation in 1966 of replacing 3,300 volt distribution underground cables with larger cross-section 11,000 volt U/G cables in order to increase distribution system capacity and hence reduce voltage fluctuations and system losses.

3. Provide an alternative feed of larger capacity to the industrial areas of Kissy and Wellington in order to increase capacity and reliability.

4. To start work in 1966-67 on reconstruction and replacement of 3.3 KV Transformers and Switchgears with 11,000 volt equipment to be bought partly from remaining funds available from first International Bank for Reconstruction and Development loan for power development in Western Area and partly from Corporation's own resources.

5. Restringing of Low Voltage lines in many areas with conductors of larger cross-sectional areas as well as extending the supply to areas not yet served with electricity. In this regard, it is interesting to note that less than three houses in ten have electricity supply in the city of Freetown, and the units consumed per head per annum is about the lowest in the international scale.

PROVINCES:

Bo: A new 2,000 Kw station is already in commercial operation. The problem lies in major extensions to the distribution system

to increase the number of consumers as well as to reduce voltage fluctuations. This project, which is 50% completed, has been stopped by unavailability of funds.

Bonthe, Kabala and Pujehun: Additional capacities of 100 Kw minimum are required in each of these undertakings to cope with normal system increase in demand.

Kambia - Rokupr: Installation of 2#0 x 140 Kw sets in Kambia is of immediate necessity if the activities of the Corporation are not to come to a halt, and then feeding Rokupr, 12 miles away, with High Voltage interconnector. Specification and construction of High Voltage Lines similar to that of Makeni-Magburaka.

Kenema: Detail scheme has been submitted to Government for the development of this undertaking, which is developing at a high rate. The scheme briefly consists of the installation of 2#0 X 1,000 Kw sets similar to that installed in Bo, to cope with increased load in Kenema itself and to feed Blama Town and Kangha (new installations) situated 12 miles and 6 miles respectively on either side of Kenema. Work on this project is expected to start in 1966.

Koidu: A fast-growing undertaking where it is extremely difficult to keep pace with demand. Present installed capacity (including mobile generators) is 600 Kw. It is proposed to increase station capacity to 2,000 Kw in the first instance and feed neighbouring towns and villages within a radius of 25 miles. At a later stage, provided agreement could be reached, to link up the Corporation system with the Sierra Leone Selection Trust system in order to minimise capital expenditure and to increase utilisation of installed equipment.

Makeni - Magburaka: The project will consist of increasing the generating capacity at Makeni from its present 750/000 Kw and then feed Magburaka via an interconnecting High Voltage overhead line constructed to 33,000 volt specification-but operated at 11,000 volt in the early stages, maintaining only standby capacity at Magburaka for emergency.

Moyamba: With the establishment of a mill in this town, an additional 250 Kw Diesel Unit is required plus extensions to the distribution system (High and Low Voltage).

Port Loko - Lunsar: Replacement of 2#0 x 50 Kw sets with at least 2#0 X 140 Kw units is contemplated to cope with increased demand in the two areas. Provided funds permit, the installation of a standby unit at Lunsar, 22 miles distant from Port Loko, is envisaged in the event of outage of overhead line.

PHASE II -- Initiation of New Projects

WESTERN AREA

During the Plan period it is proposed to start work on the third Diesel Unit at Kingtom (July 1966) to forestall limitation of the station services resulting from excessive corrosion problems which have arisen from sea water cooling as well as to cater to increased system demand. Provision for this extension was made during the construction of the present system, and this operation should be completed in July 1967.

Phase II of expansion at Kingtom consists briefly of the installation of 2#0 X 15/20 Megawatt Steam Turbine and Boilers to an extension of the present Power Station. The sets would be installed one at a time, beginning in 1967 or 1968, but much work will be done in the initial stage to reduce the installation time of the second set.

Commercial operation of the Guma Hydroelectric Station (capacity 2,500 Kw maximum) is expected to start in 1967, but its small capacity will limit its impact on the system as a whole.

A continuous programme of extension and improvements to the distribution system to meet increased demand is underway.

PROVINCES

PROVINCES

In addition to raising the extensions to existing electric power plants mentioned above, Government must make by 1971 detailed surveys and hydrological investigations to determine the feasibility of developing the hydroelectric potential of the Bumbuna Falls.

Then Government by 1971 will have to face several important decisions: (1) Should exploitation of this hydropotential commence, or (2) should a grid transmission system be constructed linking existing key stations whose capacities would be increased, or (3) should a combination of the two approaches be undertaken?

Staff Training of Electricity Corporation Personnel

In this infant stage of the Corporation, an attempt to draw up an almost precise training programme for the first five years of the Corporation's life has been made on a year-to-year basis. This exercise focuses attention on the main short-term and essential needs for improving the general efficiency of the Corporation as a whole within the shortest possible time.

Maximum use of local training facilities is emphasized as follows:

1. The Technical Institute and Trade Centres (Freetown and Provincial).
2. The Freetown Commercial Training College.
3. The Civil Service Training College.
4. Government Departments with established training schools, e.g. Ministry of Works, Surveys and Lands.
5. The Sierra Leone Selection Trust.
6. The University College of Sierra Leone.
7. In-Service Training Schemes -- Sierra Leone Electricity Corporation.

Training School/Centre. The main facet of implementation as well as realization of the proposals will be the establishment of a Training School/Centre within the Corporation, especially for the technical grades. The estimated overall cost of establishing such a School/Centre would be in the region of Le 5,000. In this connection an Education and Training Officer will be needed to liaise with management with a view to collating training requirements, policy making and organising training schemes. His recruitment and salary of about Le 4,000 should be provided for.

Finance. The financing of a comprehensive training scheme will require the following items of expenditure:

1. Salaries or wages of trainees.
2. Fees (tuition, examination, lecturers).
3. Allowances (subsistence in the case of overseas trainees; travel).
4. Passages for overseas trainees.
5. Books, instruments, etc.

Engineering.

Professional Level: Overseas training is a sine qua non for certain posts such as Superintendents and Engineers. The Corporation's immediate needs could be met from already trained personnel abroad seeking employment in Sierra Leone. In the case of Superintendents, training could be arranged with appropriate engineering concerns abroad based on the Corporation's needs. Specialized training in certain fields is recommended.

Subprofessional and Artisan Level: Local facilities for good practical training are presently non-existent, but with the establishment of a trade school this lack can be rectified and a necessary supplement to facilities for theoretical instruction provided. Training up to artisan levels would be provided, and when necessary, use could be made of short visits abroad for supplementing trainees' knowledge in particular engineering branches.

Clerical. In the clerical field, facilities already exist locally for positions up to Supervisory level. Clerical staff from the provinces will be sent to Headquarters for in-service training on the various aspects of the Corporation's work, as and when possible. Specialized training in certain fields will call for training overseas.

Staff Training Requirements for Electricity Corporation Personnel

	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Professional Level			
Engineers			
Supply	8	14	22
Generation	-	3	3
Commercial	1	1	2
System Design	-	3	5
Subprofessional Level			
Superintendents			
Distribution	20	12	32
Installation	5	2	7
Shift	12	15	27
Meter & Test	2	2	4
Technical Level			
Electrical Draughtsmen	1	5	6
Linesmen	40	20	60
Cable Jointers	10	12	22
Diesel Fitters	42	12	54
Power Station Attendants	180	20	200
Instrument and Meter Mechanics	6	12	18
Bench and General Fitters	50	80	130
Technical Apprentices	5	20	25
Learners (Craft Apprentices)	20	20	40
Administrative			
Accounting			
Financial Controller	1	1	2
Financial Accountant	1	1	2
Management Accountant	1	2	3
Accounting Clerks	60	48	108
Stores & Purchasing Officers	1	2	3
Storekeepers	1	1	2
Cashier	1	1	2
Secretarial			
Secretary/Admin. Officer	1	1	2
Personnel Officers	1	1	2
Stenographers	3	18	21
Clerks	60	54	114

Proposed Electricity Corporation Development Expenditures

In Leones

	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Freetown						
King Tom						
3rd Diesel Unit (9,000 KW) -						
external	90,000	755,000	45,000			890,000
internal		10,000				10,000
Steam Station						
1st Unit, 15,000 KW						
external			200,000	200,000	1,000,000	1,400,000
internal				200,000	1,000,000	1,200,000
Distribution System Improvements reconducting (3.3KV to 11 KV)						
external	375,000					375,000
internal	150,000	100,000				250,000
Extensions						
external	320,000	140,000	370,000	50,000	50,000	930,000
internal	120,000	40,000	90,000	10,000	10,000	270,000
Headquators Offices						
internal	200,000					200,000
Guma Valley Hydro Station*						
internal	800,000					800,000
Total external	785,000	895,000	615,000	250,000	1,050,000	3,595,000
Total internal	1,270,000	150,000	90,000	210,000	1,010,000	2,730,000
Total	2,055,000	1,045,000	705,000	460,000	2,060,000	6,325,000
Provinces						
Bo - Dis'n System						
external	30,000					30,000
internal	10,000					10,000
Kenema -2x1,000KW Sets						
external	65,000	440,000	120,000			625,000
internal	50,000	165,000	30,000			245,000

*Total cost to Government estimated to be Le 1,000,000.

	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Provinces - Con'd)						
Koidu -2x100 KW Sets						
external		20,000	245,000	15,000		280,000
internal		10,000	10,000			20,000
Zambia-Kolayr Inter-connector & transfor of sets						
external	40,000					40,000
internal	15,000					15,000
Makeni-Magburaka Interconnector & transfor of sets						
external	70,000					70,000
internal	30,000					30,000
Port Loko -2x140 KW Sets						
external	35,000					35,000
internal	5,000					5,000
Other Stations (Moyamba, Bonthe, Kabala, Lungi) new & transferred sets (670 KW)						
external				80,000		80,000
internal				20,000		20,000
Total external	240,000	460,000	365,000	95,000		1,160,000
Total internal	110,000	175,000	40,000	20,000		345,000
Total Provinces	350,000	635,000	405,000	115,000		1,505,000
Total Freetown & Provinces	2,405,000	1,630,000	1,110,000	575,000	2,060,000	7,880,000

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

27 SEP 1965

E. GEOLOGY AND MINES CHAPTER

GEOLOGICAL SURVEY

Geological and mineral suveys during the five year period of the Plan will be largely confined to the three-quarters of Sierra Leone for which topographic maps are available. Accurate topographic maps are not available for the greater part of the north-east quadrant of the country, geological investigation of which will, for preference, be left until a later date. Atfached is an index map showing the availability of accurate topographic maps.

It must be borne in mind that the Geological Survey of Sierra Leone has been in existence since 1918, with breaks, and that naturally the areas of Sierra Leone with the highest mineral potential have already received the most attention as regards time, effort and money spent in their investigation. Now in 1965 it is the areas of lower mineral potential which remain to be investigated.

Since the Geological Survey was first formed, its officers have discovered all the mineral deposits which are at present being mined. They have also geologically mapped at the scale of 1:50,000 those areas of the country considered to have the highest mineral potential. However, areas mapped at the scale of 1:50,000 form a relatively small part of the country. The greater part remains geologically unmapped except for reconnaissance surveys.

Objectives and Strategy

Objectives. The main objectives of the Five Year Plan are:

1. To examine in greater detail, using the most modern mineral exploration techniques, the areas of highest mineral potential in the hope that these sophisticated techniques will reveal previously undiscovered mineralisation.

2. To examine by reconnaissance surveys, both geological and geochemical, areas which are less well known and which, although considered to have a lower mineral potential, seem reasonably promising. It is hoped that these surveys will reveal targets which can be investigated by more detailed follow-up work and spot diamond drilling.

3. To examine other areas which have already been reconnaissance geologically surveyed, by more detailed geological mapping and reconnaissance geochamical prospecting. It is hoped that targets will be revealed which can be further investigated by follow-up geochemistry, geophysics and diamond drilling.

Strategy. Given sufficient time, the Geological Survey Division could carry out the greater part of the Plan, but because of the urgency and need to develop the resources of Sierra Leone as quickly as possible, it will be necessary to call for external assistance if the objectives are to be achieved in five years.

Programme

To facilitate the organisation of the survey, it is proposed to break down the work of carrying out the Plan into a number of Projects which will be tackled areally and concurrently during the period of the Plan.

Project A. The Project Area comprises four areas of Sierra Leone:

1. Pujehun and Kenema Districts in the south central part of the country. (Topographic maps 80, 91, 102, 111, 117.)

2. Kailahun District (Maps 70, 71.)
3. The Scarcies Basin in NW Sierra Leone (Maps 8, 17, 29,40, 41.)
4. The Gola Forest Area in the Southwest (Maps 103, 104, 105, 112, 113.)

These areas are known to be areas of rather complex geology and include areas of fair economic mineral potential. It is proposed to geologically map these sheet areas at a larger scale than the sheet areas of Projects C and D. Geological mapping of Area 4 has been completed and a reconnaissance geochemical survey of this area started in April 1965.

The objectives of this Project are: To geologically map the sheet areas 1, 2, and 3 above at a scale of 1:50,000 and describe the geology in bulletin form; to carry out a reconnaissance geochemical survey of Area 4; to carry out an investigation into the occurrence of diamondiferous kimberlites both within and outside Project Area A; to investigate by 'classical' prospecting methods and diamond drilling any occurrences of economic minerals discovered by the large scale mapping.

This Project will be carried out by the Geological Survey Division of the Ministry of Lands, Mines and Labour and will take eight geologists and prospectors five years to complete.

The estimated total cost over five years is of the order of Le 1,000,000.

Project B. The index map shows the outline of the four Project Areas, B1 to B4. Within the boundaries of these areas it is proposed to carry out an airborne geophysical survey, and follow-up the targets discovered by a geophysical survey on the ground, spot diamond drilling and standard methods of prospecting.

The main objective of this project is to discover possible 'blind' sulphide mineral occurrences by using sophisticated geophysical techniques. Mineral occurrences which might be discovered include the ores of molybdenum, lead, antimony, bismuth, copper and gold.

External assistance is required to carry out the airborne geophysical survey and application has been made to the British Government for this assistance.

Private enterprise has already shown an interest in Project Area B1. A consortium of mining companies has applied for a prospecting licence for the area, and ground investigations within Project Area B1 will therefore be undertaken by the consortium. It is hoped that the consortium might be induced to carry out the ground investigation of targets which may be discovered by the airborne geophysical survey in Project Areas B2 - B4.

The estimated cost of the airborne geophysical survey is Le 160,000, and the estimated total cost of this Project -- both airborne and ground investigations -- is of the order of Le 650,000.

Project C. This Project Area in north central Sierra Leone comprises map sheet areas 10, 11, 19, 20, 31, 43, 54, 65, 3, 4, and parts of 32, 44, 55, and 66. The eastern boundary of the Project Area is set by the availability of topographic base maps and by Project Area B1. The western boundary has been chosen to give an area manageable in size and to include some of the volcanic rock areas of the Rokell River Series. Included in the Project Area is a region from which over 8,000 ounces of alluvial gold were produced during the period 1935-37. The Project Area totals approximately 3,900 square miles. Reference to the 1:1,000,000 geological map shows that much of the area is believed to be granite with the Pre-Cambrian sediments of the Rokell River Series occurring to the south-west. Little is known of the geology of the northern part of the Project Area.

The objectives of the survey of Project Area C are to carry out as Phase 1: (a) a reconnaissance geological survey; (b) a reconnaissance geochemical survey: (c) to produce a

geological map of the Project Area at the scale of 1:100,000 or 1:150,000 and to write and publish a report on the geology and geochemistry of the Project Area. During the later stages of the programme follow-up geochemistry will be carried tou to delineate areas of anomalous metal content picked out by the reconnaissance. Phase 2 of the programme for Project Area C will be the investigation by diamond drilling of the targets discovered.

It will be necessary to seek overseas assistance to carry out Phase 1 of this Project. It is envisaged as taking three years to complete and the services of three geologists/ geochemists. Phase 2 of the programme depends, of course, on the discovery of possible economic mineral occurrences (the targets) of Phase 1. If no targets are found, the Project will be abandoned. If targets are discovered, they will be spot drilled by the diamond drilling section of the Geological Survey Division during the last two years of the Plan.

A provisional figure for the estimated total cost in Sierra Leone of carrying out Phase 1 of this project is Le 200,000.

Project D. The Project Area in southwest Sierra Leone comprises map sheets 76, 77, 87, 88, 89, 90, 100, 101, 109, 110, 115, 116 and parts of 78, 79, and 118. The Project Area boundaries are set to the east by Project Area A, to the west by areas already geologically mapped and in which mining activity is in progress, and to the north by Project Areas B and C. The Project Area totals approximately 4,000 square miles. Map sheet 87 has been geologically mapped at the scale of 1:50,000. In the western part of the Project Area bauxite has been mined since 1963 and production is now running at 250,000 tons a year. Further, approximately 30,000,000 tons of rutile have been indicated just to the south-west of the Project Area and mining will start within a year or so. The mineral potential of the Project Area is though to be reasonably good.

The objectives of the survey of Project Area D are to carry out as Phase 1: (a) a reconnaissance geological survey; (b) a reconnaissance geochemical survey; (c) to produce a geological map of the Project Area at the scale of 1:100,000 or 1:150,000 and the geochemical maps at either 1:50,000 or 1:100,000, and to write a report of the geology and geochemistry of the Project Area. During the later stages of the programme follow-up geochemistry will be carried out to delineate areas of anomalous metal content detected by the reconnaissance. Phase 2 of the programme for Project Area D will be the investigation by diamond drilling of targets discovered.

It will be necessary to seek overseas assistance to carry out Phase 1 of the project. The project is envisaged as taking three years to complete and the services of three geologists/geochemists. Phase 2 of the programme depends, of course, on the discovery of possible economic mineral occurrences (the targets) in Phase 1. If no targets are discovered, the project will be abandoned. If targets are found, they will be spot drilled by the diamond drilling section of the Geological Survey Division during the last two years of the Plan.

A provisional figure for the estimated total cost in Sierra Leone of carrying out Phase 1 of this project is Le 200,000.

M I N I N G

In the sector of mines and mining Government seeks to encourage existing mining companies to expand their activities and increase production. Allowances on taxation and importation of machinery for mining are liberal and are designed so that the investor would have had sizeable returns for his investment before taxation begins.

For the next five years it is proposed to extend and develop the services of the Mines Division to Government, to the public, and to the mining industry in Sierra Leone generally, at the same time increasing the revenue-earning capacity of the Division. Each of the proposed projects is designed so that within a relatively short time Government should be realizing revenue from them either directly or indirectly. The projects outlined are modest, but it is expected that when once they become established, they would continue to expand.

Objectives

The following three projects are proposed for implementation during the next five years:

1. The establishment of a research mineral dressing laboratory where milling and beneficiation tests of economic minerals can be run, and chemical analysis of mineral samples can be carried out. Such a laboratory would examine the composition and possible economic value of minerals and ores that exist in Sierra Leone, and run tests and do analysis for mining companies, prospectors, and miners. Such information should help attract new prospectors and companies to prospect for and exploit deposits of ores of which very little is known at present.

2. The development of a prospecting unit in the Division. The short-term objective of this project would be to prolong the life of the Alluvial Diamond Mining Scheme and to prospect for deposits of other alluvial minerals. The long-term objectives would be to follow up "on the ground" reports of mineral occurrences in the country and also follow up the results of the work in Project 1 above.

3. The establishment of a fully equipped machinery testing "shed" to test and inspect all forms of lifting gear and pressure vessels used in industry as required by the Machinery (Safe Working and Inspection) Act, Cap.218.

The objectives of this project are: (1) to ensure that machinery is always in safe working condition, and (2) to earn revenue for Government from fees charged for inspection and testing.

Programme

Project 1. At present detailed information on several mineral deposits in Sierra Leone is lacking or at best incomplete. Mining companies and prospectors have to send all of their mineral and ore samples overseas for analysis and beneficiation tests. Government is unable to conduct beneficiation or do research on a deposit like the Tonkolili Iron deposits.

With a Mineral Research Laboratory, Government can run tests for prospectors and existing mining companies, and more important still will be in a position to run tests and compare results with those of private mining companies. Government could itself undertake research on mineral deposits and ores that are known to exist and publish papers that would attract private firms or mining companies.

A mineral dressing research facility could (1) perform services for miners, prospectors, existing mining companies, and (2) conduct research on minerals and ores that could be of economic value if more information were available on them.

Cost. The basic equipment that must be obtained, together with suitable laboratory space in which to install the equipment to enable the project to get started should entail a capital outlay of about Le 20,000. A building costing about Le 6,000 should be adequate to house the equipment and provide an office for the officer in charge. (One of the temporary office buildings in New England could be renovated and used.) Recurrent costs for running the project and developing it are not easily assessed at this stage, but should be about Le 4,000 per year, not including the salaries of staff.

This makes a total of Le 26,000 for the first year and Le 4,000 annually.

Manpower Requirements. At the outset at least two senior staff members would be required, a mineral dressing expert and an analytical chemist. It is hoped that both men could be recruited locally and trained overseas. The officer-in-charge will be selected from the present establishment of Inspectors of Mines; other staff can be obtained locally and should not require overseas training. During the training period, however, at least one man would have to be recruited to establish the laboratory and would hand over when the Sierra Leonean had been trained.

Implementation. It is hoped that one Inspector of Mines will shortly be on an 18-month scholarship in the United States which would enable him to pursue an academic course in mineral dressing techniques, after which he would undertake suitable practical training either in the United States or the United Kingdom. He would thus not be available before the end of 1967.

Funds could be provided in the 1966/67 estimates for the building and equipment, and the project can be started in 1967 by experienced staff of two men provided by the United Kingdom Department of Technical Cooperation. By the end of 1968 the laboratory should be under a trained Sierra Leonean in the Mines Division.

Project 2: Prospecting Unit. Government must take the lead in prospecting. Minerals like alluvial gold, silver, platinum and diamonds which can be mined by Sierra Leoneans should be more thoroughly prospected. The alluvial diamond mining scheme which already has shown signs of waning can be kept going for several years if constant prospecting is kept up for new deposits. There are undoubtedly small alluvial gold and platinum mining fields that can be found and exploited either by Government or by private persons.

Prospecting during the period of this Plan will be confined to the less expensive and unsophisticated methods. In the future Government should undertake more large-scale prospecting for minerals including base metals.

Cost. This Project should have two field parties, which means that two senior staff men would be engaged full time on prospecting. The initial cost will be in the region of Le 20,000 and will cover transport and prospecting equipment. Recurrent costs of approximately Le 12,000 should cover replacement of prospecting equipment and wages. It is expected that the salaries of the men in charge of the parties and their assistants will provided from an increase in the normal yearly estimates of the Division.

Manpower Requirements. Two additional Inspectors of Mines would be required to engage in prospecting. They should be qualified mining engineers and at least nine months of their post graduate practical experience should be in prospecting. The assistants and labour will be recruited locally.

Implementation. Provision will be made in the 1966/67 estimates of the Division for an increase in the number of Inspectors of Mines and also for the purchasing of suitable equipment and transport. This project could be implemented in the 1966/67 financial year.

Project 3: Machinery Testing. Sierra Leone has almost no testing facilities for machinery (notably lifting gear). The Machinery (Safe Working and Inspection) Act which is administered by this Division requires that all machinery, particularly lifting machinery, electrical apparatus and all pressure vessels and air receivers, be inspected from the point of view of safety and safe working loads.

A machinery inspection and test shed would provide facilities for testing wire ropes, chains, blocks and tackles and all manner of lifting gear. At present such equipment either has to be sent overseas for testing or scrapped while it may still be useful. Government would earn revenue by doing tests for industrial undertakings. Already this Division profits from boiler tests and inspection of pressure vessels.

Cost. The cost of a proper test shed should be in the region of Le 3,000, and initial testing equipment should be in the region of Le 18,000. One of the temporary buildings in New England might be renovated and used to house the equipment. Recurrent cost should be approximately Le 2,000 per year, excluding salaries of staff.

Manpower Requirements. There is at present one Inspector of Machinery who could run the shed, but he would need a technician who could be obtained initially from external sources while Sierra Leoneans were being trained locally.

Implementation. It is recommended that this project be implemented in the 1966/67 financial year.

- 9 DEC 1965

Staff Training of Geological and Mining Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1971 Staff Requirements
GEOLOGICAL SURVEY DIVISION:			
Director	1*	-	1
Assistant Director	1*	-	1
Geologists	3 (2*)	5	8
Analytical Chemist	1	-	1
Prospectors	4 (2*)	2	4
Diamond Drillers	2	-	2
Cartographers	1	2	3
MINES DIVISION:			
Mines Inspectors	-	2	2
Mineral dressing expert	-	1	1
Machinery inspector	1	-	1
Machinery technician	-	1	1

*Expatriate personnel

Proposed Plan Expenditures on Geology and Mining

Geological Survey Projects		
A - Pujehun-Kenema, Kailahun, Scarcies Basin and Gola Forest		Le 1,000,000
B - Central East Sierra Leone	(Airborne survey	160,000
	(Ground survey	490,000
C - North Central Sierra Leone -- Phase 1		200,000
D - South West Sierra Leone -- Phase 1		200,000
		Le 2,050, 000
Mines Division		
1 - Mineral Dressing Laboratory		26,000
2 - Prospecting Unit		20,000
3 - Machinery Testing		18,000
		64,000
Total Proposed Geology and Mines Expenditures		Le 2,114,000

MF to scrutinize

Highway Section goes here

- 3 DEC 1965

Highway Section goes here

RAILWAY

The Sierra Leone Railway is a Government-operated railway serving the interior of the country from the port of Freetown. The Railway is 30" gauge. Trains are operated for passenger and goods service utilising both steam and diesel locomotives. The main line runs from Freetown generally eastward through Bo and Kenema to Pendembu near the border with Liberia, a distance of 227 miles. At Bauya, 64 miles from Freetown, a branch line runs in a general northeasterly direction for 82 miles to Makeni. (See map in Appendix.)

Objectives

In recent years, largely as a result of highway competition, passenger traffic on the Railway has fallen off sharply and there has been a gradual decline in goods tonnage carried since 1957. Hence during the Plan period the major objective will be to improve the Railway's reliability of service in order to win back goods tonnage from other carriers. To accomplish this the Railway plans to modernise its operating methods and to make certain capital improvements to its diesel locomotive power, the telecommunications system, the bridges and repair shops.

If these urgent short-term improvements are effective in restoring the viability of the Railway as a freight carrier, then Government will consider the implementation of a long-term Railway improvement programme involving re-alignment of track, reconstruction of bridges, and acquisition of new rolling stock.

Programme

The short-term improvements to be undertaken during the first one to two years of the Plan period include both operational measures and capital expenditures.

The operating performance of the Railway will be improved by running it more as a commercial operating organisation. The traffic and the mechanical and civil engineering departments will be reorganised to bring them into line with present-day operating requirements. Staff training programmes will be expanded at all levels. Fewer and heavier trains will be run and on a more closely controlled basis. The telecommunications system will be reconstructed. Complete dieselization will be sought to insure constant availability of locomotive power. A flexible freight rate structure will be introduced to attract to the Railway a larger share of th e country's import, outward and internal traffic.

Immediate capital improvements to be carried out include conversion of existing diesel locomotives, purchase of additional diesels, re-equipping of workshops, reconstruction of telecommunications system, examination and strengthening of bridges, and staff training facilities. Other capital improvements include procurement of railcars and freight delivery lorries, realignment of track, and other minor works.

Staff Training

The Railway plans to introduce training schemes both for new entrants and for serving staff in order to improve the standards of performance of personnel at all levels.

Staff Training of Railway Personnel

Classification of personnel	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Professional Level			
Sub-professional Level			
Technical			
Artisan			
Administrative			

Proposed Plan Expenditure on Railway

In Leones

Project	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Conversion & modification of existing diesel locomotive engines	144,000					144,000
Procurement of new convertible diesel locomotives	430,000					430,000
Construction & equipping of Do workshops & 5 Running Sheds	200,000					200,000
Improvement of Communications system	70,000					70,000
Inspection, test, strengthening, & repairs of existing bridges	300,000					300,000
Training of staff	78,500					78,500
Total Immediate Improvements	1,272,500					
Procurement of convertible railcars, inspection cars, & trolleys		500,000				500,000
Purchase of Freight Delivery Lorries		190,000				190,000
Temporary realignment of worst stretches of existing track		750,000				750,000
Opening of 3 new quarries		500,000				500,000
Welding of rails at curves		30,000				30,000
Extending loops & siddings		5,000				5,000
Construction of road level crossings		12,000				12,000
Analysis of Freight & Passenger rates		7,500				7,500
Introduction of cost-job accounting methods at workshops		5,000				5,000
Total Short-Term Improvements		1,999,500				Le 3,272,000

13 OCT 1965

F. TRANSPORTATION AND COMMUNICATIONS CHAPTER (Con'd)

PORTS, WATERWAYS AND WATERBORNE TRANSPORTATION

The Sierra Leone Ports Authority's fundamental objective during the Plan period is to ensure that Port facilities will be adequate to handle all likely inward and outward traffic without delays caused by insufficient berths or by the working of excessive and expensive overtime.

Programme

Construction. The construction programme necessary to meet this objective has already reached an advanced stage of preparation. It comprises two major projects in the Port of Freetown:

1. Extension of Queen Elizabeth II Quay. This scheme provides for two additional berths to be available for use by the end of calendar year 1967 and two further berths by the end of 1969. Each new berth will be 513' long, and they will extend westward from the existing Quay, at an angle of 30° from it and across Fourah Bay. The first phase provides for two additional dry cargo sheds in the new Quay, each of 53,815 square feet and a cold-storage shed. There will also be addition space behind the two later berths for such specialised facilities as may become necessary with the expected development of the use of containers in West African trade.

The quay extension will also require the filling of Fourah Bay behind the new Quay and up to the high-water mark. Although it is not likely that such fill will consolidate sufficiently to build on it during the Plan period, it offers possibilities for future development.

2. Lighterage Quay. This is to be situated on an eastward extension of the existing Queen Elizabeth II Quay. It will provide sufficient facilities to replace the present lighterage quay on Government Wharf. The centralisation of all Port facilities in Cline Town will both facilitate supervision and reduce costs.

Equipment. The Sierra Leone Ports Authority has devoted considerable attention to the provision of equipment and craft necessitated by the above extensions, and also to phased programme of replacement and renewal of existing equipment, much of which is becoming obsolete.

1. Harbour Craft. It is planned to provide the following:

1 additional berthing tug	Le 500,000
1 replacement berthing tug	400,000
2 additional ferries (already arrived in 1965)	
1 additional pilot launch	50,000
1 additional mooring and general duty launch	15,000
2 replacement mooring and general duty launches	35,000
1 replacement passenger launch	50,000
1 replacement water barge	

2. Radio Equipment and Navigational Aids.

Lighting of Shebro River buoys	2,000
Various replacements and renewals	15,000

3. Mechanical Handling Equipment.

4 additional portal cranes (part of Quay Extension Project contract)	
3 additionnal 4-ton mobile cranes for lighterage quay	30,000
3 replacement 3-ton mobile cranes	24,000
2 replacement 4-ton mobile cranes	20,000
2 replacement 10-ton mobile cranes	41,000
1 additional 30-ton mobile crane	35,000
15 replacement fork-lift trucks	75,000
10 additional fork-lift trucks (to replace present electric platform trucks)	50,000
21 replacement Scammell mechanical horses	63,000
34 replacement trailers	40,800
Miscellaneous items of workshop equipment for above	18,520

	Le
4. Marine Engineering Workshop Equipment.	
Miscellaneous replacements	1,620
Miscellaneous additions	39,600
5. Marine Engineering Civil Works.	
Repair and replacement of mooring dolphin and rubble bank (Cline Town Slipway)	50,000
Miscellaneous minor additions	8,600
6. Vehicles	25,800
7. Office Furniture and Equipment	14,960

Staff Training

The Ports Authority will require additional personnel for the expansion programme outlined above, including the replacement of expatriate officers serving on contract. The Staff Training Table at the close of this chapter summarizes the position.

Financing

Government is financing the construction programme under contractor finance. The Ports Authority itself will bear the financing of all the equipment -- other than the additional berthing tug to be financed by Government. See Plan Expenditure Table A at close of chapter.

AIRPORTS AND AIR TRANSPORTATION

Today Sierra Leone's air network includes 13 airfields:

International Lungi*

Internal, Operational: Bo*, Hastings*, Kenema*, Yengema*

Internal, Emergency: Daru, Kambia, Magburaka, Makeni, Port Loko, Waterloo

Internal, Private: Boajibu, Tongo

(*The airfields marked by an asterisk are served by Sierra Leone Airways.)

Programme

Construction. During the Plan period the development of Lungi Airport to Class A International standards will be completed. Improvements will be made to the airfields at Bo, Hastings, Kenema, and Yengema. New airfields will be constructed at Bonthe and Gbangbatoke.

Lungi International Airport. The development programme provides for the lengthening of the existing runway from 6,500' to 10,500', with load classification number increased from 30 to 80; for installation of night landing facilities, adequate air navigational aids, and complete new re-fuelling hydrant system to double present pumping rates. The target date for completion of these improvements is June 1966, at which time the airport will be opened for continuous day and night operation to accomodate modern long distance aircraft.

The new Terminal Building was completed in 1964 and is now fully operational. Designed to take up to 80,000 passengers a year with peak flow of 500 passengers an hour, the airport handled approximately 30,000 passengers in 1964. This figure is expected to double by 1968 and level off by 1970.

An extension to the now-inadequate V.I.P. lounge is planned.

Accomodation of the increasing number of passengers will require the construction of a hotel at Lungi Airport. Space for 150 transit passengers should be available and complete before the Airport starts operating of a 24-hour basis in 1966. Plans for the hotel have been drawn up, including provision for future expansion as the need arises.

Staff housing will also have to be provided when Lungi Airport increases its operations. Present plans call for 6 junior and 6 senior houses to be ready for occupation by May 1966, with a total of approximately 40 junior and 12 senior houses constructed by the end of 1970.

Internal Airfields.

1. Bo: Bo is an important staging post for scheduled services. The runway is suitable for D.C.3 operations, but needs to be surfaced for all-weather use. The installation of a standby beacon will make Bo suitable on a 24-hour basis as a compulsory reporting point for international traffic on Advisory Route A.D. 35, beginning January 1966.

2. Hastings is the terminus and operational base for Sierra Leone Airways internal air services. The airfield is to be equipped with passenger accomodation. A new hanger under construction to improve storage and maintenance facilities should be completed by June 1966. When the Sierra Leone Airways begins operating aircraft of the DC-3 category, the Hastings runway will have to be extended ~~XXXX~~ 1,000' to the West to meet the 4,000' requirement.

3. Kenema is suitable for aircraft of the DC-3 category. A non-directional beacon now located in Kenema is being re-sited at the airport to facilitate homing in bad weather.

4. Yengema has considerable traffic potential. However, its 3,100' runway cannot accomodate DC-3 category aircraft unless it is extended another 1,000'.

If adequate traffic materializes, two new airfields capable of accomodating DC-3 category aircraft will be constructed at Bonthe and Gbangbatoke.

The remaining airstrips in Sierra Leone are unattended landing strips which cover security requirements and occasional use by Sierra Leone Airways and/or light aircraft capable of operating from short airstrips.

Telecommunications Equipment, Lungi and Out Stations.

Lungi. In addition to telecommunications equipment being provided for under current development programme, the following may be needed 1966-70 to meet future operation requirements:

V.H.F. Direction Finder	Le 30,000
Surface Movement Radar	110,000
Approach Radar	100,000
Surveillance Radar	200,000
No Break Generating Set for Control Bldg	10,000
Replacement V.H.F. R/T Transmitters and Receivers in the Control Building	10,000

Internal Airfields. Single side band transmitters and receivers are being installed in Bo, Kenema, Yengema with available channels for ground to ground communication with Lungi and other out stations as well as air to ground frequency for communication with aircraft. Completion date for this installation is November 1965. Other equipment to be installed include V.H.F., R.T., but this must be justified by traffic density.

Sierra Leone Airways. Sierra Leone Airways, formed in 1961, has enjoyed a steady increase in number of passengers and freight carried in its present two DH Heron aircraft. Bigger craft are now needed if services are to continue to expand, with the DC-3 appearing the most suitable possibility.

Internationally Sierra Leone Airways operates in arrangement with British United Airways, currently using Britannia aircraft. With the completion of the longer Lungi runway in 1966,

VC-10 aircraft can again be employed in this service. International air freight is increasing, and Airways officers at Government Wharf have been equipped to meet this demand.

Statistics on international and internal air traffic are given in the Statistical Table at the close of this chapter.

Staff Training

The Department of Civil Aviation will require additional personnel for the development program outlined above, including replacement of expatriate personnel.

1. Radio Technicians and Ground Operators. Pye Company Limited, which is supplying and installing navigational aids and equipment at Lungi, has also prepared a training programme for telecommunications staff. In addition to training Sierra Leoneans in England, Pye will start a training school at Lungi about September 1966, offering both beginning and advanced courses in telecommunications, radio engineering, R.T.T. operations, and ground radio operations.

2. Air Traffic Control. Courses for training Air Traffic Control Officers and Fire Officers are provided by both USAID and UK Technical Assistance. Sierra Leoneans are already taking these courses, and by 1966/67 there should be trained 5 Air Traffic Control Officers, 2 Aeronautical Information Officers, 1 Fire Officer, and 2 Sub-Fire Officers. This training program is expected to furnish all the needed staff for the development programme between 1968 and 1970.

In-service training for Junior Technical Staff, Air Traffic Control, and Fire Services will continue as at present, possibly merging 1968/70 with the Radio School to form a Civil Aviation School offering all necessary courses.

13 OCT 1965

POSTS AND TELECOMMUNICATIONS

Objectives

Postal. With the general spread of literacy resulting from the constantly improving educational facilities in Sierra Leone and also the gradual expansion of mining, agricultural, and commercial enterprises throughout the country, the volume of postal business will certainly increase from year to year. It is therefore necessary to plan for adequate facilities to meet these growing needs, including:

1. A building programme for new Post Offices and staff quarters in the Provinces and rural areas to provide facilities which are suited to the growing needs of the country and sufficiently flexible to allow expansion for future needs.

2. A gradual provision of mail conveyance facilities to provide more efficient mail delivery service and meet future needs. Priority should be given to providing collection and delivery to and from all chiefdoms in the country, linking them with the present main trunk centres (rail and air).

3. Mechanisation of the Sorting Office and Accounts Branch in the Freetown General Post Office.

Telecommunications. A country-wide development programme to meet the operational telecommunications needs of this Department, based on a 1959 survey, is currently underway. The objective is the modernisation and expansion of the existing telecommunications facilities to meet foreseeable requirements up to 1970, devised in such a way that methodical expansion will be possible thereafter. Payment for this project was arranged under pre-financed conditions to be met from local resources, and completion is expected by December 1965.

Since the initiation of this project Sierra Leone has undertaken international obligations, such as the Dakar Plan for integrated internal telecommunications facilities between adjacent member states of the Organisation for African Unity, and the proposed Customs Union between Ivory Coast, Liberia, Guinea, and Sierra Leone. Domestic developments following rapidly in the wake of Independence, such as expanding mining industries and agricultural development in remote parts of the country, also call for further expansion in the internal telecommunications system.

Programme

1. Post Office Buildings (Provinces). Traffic and provincial staffing problems are accentuating the already urgent demand for more adequate buildings. It is proposed to provide Le 100,000 annually for post office construction in the Provinces.
2. Post Office Buildings (Freetown). The new Post Office Building in Freetown (built 1962) is already proving inadequate. Consideration should be given to the acquisition of the buildings adjoining the north side of the General Post Office, to enable extension of the northern end of the Post Office. A 5- or 6-storey extension could be built on this site, at an estimated cost of Le
3. Mail Vans for the conveyance of mails and Travelling Post Offices. The collection and delivery of mails beyond the principal towns in the Provinces requires better facilities. Because of generally low population density and scattered villages, it is not economical to establish departmental Post Offices or Postal Agencies in the majority of villages and falmis. There is, however, a growing demand for postal facilities in such communities, small as they are. This demand could be met by using suitable mail vans as Travelling Post Offices.

4. Mechanisation of the Sorting Office and Accounts Branch. Because postal traffic/now approaches something like 50,000 items per day, a policy of gradual mechanisation of the Sorting Office should be undertaken. A preliminary survey by experts to advise on a logical development programme is needed. The cost of this survey will be approximately Le 10,000.

In the Accounts Branch some machines are already in use. Additional machines, costing about Le 6,000 will be needed toward the end of the Plan period.

5. Expansion of Telecommunications System. Since the earlier development programme for expanding the telecommunications system is proving inadequate, a vigorous stepping-up of the rate of modernisation throughout the country is necessary in order to ~~XXXX~~ keep pace with the acceleration of industrial and other projects already programmed. An annual allocation of Le 400,000 for the five years commencing 1966 will be needed. It will be utilised for the following extensions and additions to the improved main system which is due for completion in 1965:

a. Extension of micro-wave trunk system from Liberian border: This is a logical step in the building of a cohesive and efficient inter-communication system for West Africa, if it is to attain the extent and traffic density required to justify links by satellite channels or broad-band submarine cables to the rest of the world.

b. Extension of micro-wave trunk system to Lungi Airport: When the airport is up-graded to Class A standard, ample first-class telephone and teleprinter channels to offices and hotels in Freetown and the rest of the country are essential for maximum airport efficiency.

c. Provision of spur connections on the micro-wave system to serve the iron ore, bauxite, and rutile mining areas: The importance of these industries in the country's economy demands their every encouragement. They should, in turn, generate valuable communications traffic and contribute to revenue.

d. Extensions to and improved services for the eastern diamond areas: The economic importance of these districts in the country's economy justify providing services for them, although they should also be a good source of revenue.

e. Expansion of rural distribution line networks: Required in areas where promotion of rapid economic growth is envisaged.

f. There are also a number of minor projects to be financed: a new workshop must be built at the Tower Hill depot; Njala University College and its subsidiaries at Rokupr and Mussia require good telephone connections; stand-by power plants are needed in a number of provincial centres.

g. External Telecommunications: Government in partnership with Messrs Cable and Wireless operates Sierra Leone's external telecommunications facilities. Government is committed to providing capital expenditure up to about Le 500,000 for capital development, from about 1967.

Staff Training

Engineering Training School. There is an acute need in the Posts and Telecommunications Department for officers who can confidently maintain the elaborate and delicate telecommunications facilities that are now being installed. This specialised training cannot be obtained outside the Posts and Telecommunications Department. An Engineering Training School is urgently needed. The estimated capital expenditure for such a school is Le 50,000 ~~is needed~~ for buildings and equipment, with an annual recurrent expenditure of Le 12,000 to cover teachers and supplies. (See Staff Training Table below.)

14 OCT 1965

Staff Training of Transportation and Communications Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Highways			
Professional:			
Engineers, Highway		7	
Architects (tropical)		4	
Technical:			
Road Technicians		16	
Quarry Organisation		7	
Pre-cast Concrete Products		3	
Bridge Inspectors including Diving		4	
Constructural Plant Operators		16	
Vehicle Maintenance		12	
Plant Maintenance		13	
Workshop			
Foremanship		10	
Joinery		5	
Plumbing		6	
Clerk of Works		4	
Plasterer		3	
Pavior		2	
Drawing Office Staff			
Highways		8	
Architects		8	
Quantity Surveyor Staff		6	
Refrigeration & Air Conditioning Technicians		4	
Lift and Hoist Technicians		4	
Laboratory Staff		4	
Civil Engineer Trainees		4	
Mechanical Engineer Trainees		4	

Buildings:	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Professional		10	
Technical and Sub-Professional			
Draughtsmen		20	
Quantity Surveyor Assistants		5	
Architectural & Engineering Asstn		5	
Foremen		40	
Clerk of Works		10	
Inspectors		20	
Engineering Assistants		10	

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	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Transport:			
Professional:			
Technical:			
Railway			

	Present Staff Availabilities		To be Trained	1970 Staff Requirements	
Ports					
Professional:					
Marine Engineers	3	+	4	5	7
Doctor			1	1	
Accountants	1		4	5	
Marine Officers	5		5	5	10
Sub-professional					
Quay Superintendents	6		3	8	9
Civil Engineering Superintendent			1	1	
Aviation					
Professional and Administrative:					
Director of Civil Aviation	1		3		
Deputy Director of Civil Aviation			1		
Senior Operations Officer			3		
Operations Officer	1		5		
Senior Signals Officer			2		
Senior Air Traffic Control Officer			2		
Fire Officer			1		
Airport Administration					
Airport Commandant	1		3		
Administrative Assistant	1		3		
Clerks and Storekeepers	2		19		
Air Traffic Control Services					
Senior Air Traffic Control Officer	1		3		
Air Traffic Control Officers	2		17		
Air Traffic Control Assistants			17		
Aerodrome Control Officers	4		17		
Aeronautical Information Officers			10		
Engineering Division					
Senior Radio Engineer	1		3		
Radio Engineer	1		6		
Assistant Radio Engineer			5		
Radio Technicians	2		20		

	Present Staff Availabilities	To be Trained	1970 Staff Requirements
(Aviation -- con'd)			
(Engineering -- con'd)			
Teleprinter Mechanic		5	
Transmitter Attendants	5	15	
Telecommunications			
Signals Officer	1	3	
Assistant Signals Officers		8	
Communications Supervisors	4		
Senior Radio Operators	4	~~28~~ 12	
Radio Operators	17	67	
Fire and Crash Services			
Aerodrome Fire Officer	1	3	
Assistant Aerodrome Fire Officers		5	
Sub-Officers	2	11	
Leading Firemen	10	36	
Firemen Drivers	31	180	
Finance			
Sub-Accountant		3	
Clerks	2	8	
Security Services	23	88	
Motor Transport	1	19	
Sierra Leone Airways			
Posts and Telecommunications			
Administration and Accounts			
Chief Accountant	1		1
Senior Accountant	1	1	2
Accountants	4	7	11
Postal Traffic			
Senior Postal Controller	1	2	3
Postal Controllers	4	2	6
Personnel Officer	1		1
Postal Inspectors	4	1	5
Inspector, P.&T. School	1		1
Telephone Exchange Superintendent	1		1

	Present Staff Availabilities	To be Trained	1970 Staff Requirements
(Posts and Telecommunications — con'd)			
Engineering			
Senior Engineer	1	2	3
Engineer	4	10	14
Senior Telecommunications Supt	1	1	2
Telecommunications Superintendent	7	5	12
Telecommunications Inspectors	11	4	15
Senior Technical Officers	2	4	6
Technical Officers - Grades	17	18	35
Technicians Grades	6	9	15
Lecturers		2	2
Instructors		6	6

PROPOSED PLAN EXPENDITURE ON TRANSPORTATION AND COMMUNICATIONS

In Thousands of Leones

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Total
Highways (See p. for detail)						
International Highways						18,355
Trunk Primary						16,200
Trunk Secondary						850
Street Improvements						2,000
Major Feeder Roads						490
Minor Feeder Roads						445
Tarring Town Streets (Provinces)						100
Trans. and Feas. Studies						600
Establishment of Road School						276
Plant for Maintenance						2,195
Workshop & Main. Equip.						200
Central & Mobile Lab.						20
Traffic Eng. Section						20
Deferred road payment						854
Total Highway						41,305
Road Transport						
Buses	572.9	146.4	85.3	121.9	170.6	1,097.1
Depots	16.7	30	30		1	78.7
Workshops				20	9	29
Staff Quarters	1	18	18	18	3	57
Total Road Transport	591	194	133	160	208	1,285.8
Railway						

(Proposed Plan Expenditure on Transportation and Communications -- Con'd)

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Total
rts						
Construction:						
Extension of Queen Elizabeth II Quay						
Lighterage Quay						
Ports Authority Equipment:						
Harbour Craft						
Radio Equipment						
Handling Equipment						
Marine Eng. Workshop						
Marine Eng. Works						
Vehicles						
Office Furniture						
Total Ports						
viation						
Construction						
Lungi						
Do						
Hastings						
Kenema						
Yengema						
Bonthe						
Gbangbatoke						
Equipment						
Lungi						
Internal airfields						
Aircraft						
Total Aviation						

MW has been asked to fill in
SLPA "

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Total
sts and Telecommunications						
Postal System						
New P. O. & Quarters	100	100	100	100	100	500
Delivery Vans	10	10,	10	10	10	50
Mechanisation - Sorting				10		10
Mechanisation,-Accounts					6	6
Internal Telecommunications						
Extension to Liberian border	200	200				400
Extension to Lungi Air.	160	60				220
Connections to mining areas	40	140	90			270
Extension to eastern diamond areas			120	90	40	250
Expansion of rural networks			110	80	230	370
Minor projects & conting.			80	280	180	540
External Telecommunications						
Transmitter Buildings		50	20			70
Transmitter Equipment		50	80	50		180
Receiver & Admin Bldgs		40	10			50
Receiver Equipment		10	50	50		110
Staff accomodation		20	10			30
Emergency Power Plant & Air conditioning		50	10			60
Telecoms. Eng. Training School	~~520~~	~~925~~ 25	~~915~~ 25	~~670~~	~~516~~	~~3,100~~ 32
Pre-financed Contractual Obligations-communications	633.8	602	570.4	273.2	[illegible]	2,079.4
Total Posts and Telecommunications	1,143.8	1,357	1,285.4	943.2	516	5,245.4

TOTAL TRANSPORT AND COMMUNICATIONS

Statistics 1961-65 and Targets for 1970

Item	Actual 1961	Actual 1965	Target 1970
Highways (in miles):			
International			
Improved		140	340
Unimproved		250	85
Trunk Primary			
Improved		6	186
Unimproved		602	452
Trunk Secondary			
Improved		18	74
Unimproved		606	,550
Feeder Roads		2,500	3,250
Road Transport			
Buses		50	141
Railway			
Traffic			
Passengers	1,942,756	907,287	2,000,000
Goods (in tons)	102,850	67,190	150,000
Rolling Stock			
Locomotives	45	34	33
Coaches	158	155	170
Wagons	885	885	970
Ports - Freetown			
General Cargo (in tons)			
Discharged	316,059	338,167	
Loaded	82,377	79,988	
Bunkers Supplied	265,266	196,917	
Aviation			
Aircraft Movements	(1963)	(1964)	
Lungi	3,626	3,043	
Internal		8,350	
Traffic			
Passengers			
International	28,435	30,546	
Internal			
Freight			
International (in tons)	213 11	354 11	13
Posts and Telecommunications (Ainfields)		(1963)	
Postal Articles Handled	13,460,000	17,040,000	
Telephone Exchange Lines	1,305	1,568	
Telegrams dispatched	128,128	58,118	

Sources: Ministry of Works, Road Transport Corporation, S.L.Railway, S.L.Ports Authority, Department of Civil Aviation, Department of Posts & Tele.

II G. TOWN PLANNING AND HOUSING

Objectives

Town Planning. To plan and develop the physical environment essential for the promotion of human and community life in urban and rural areas.

To plan land use, transport and utilities, houses, community buildings and services to create attractive and productive towns and villages.

To zone Freetown and other urban areas throughout the country to provide for residential, commercial, and industrial sites, including complementary services such as transport, utilities, schools, and recreational areas.

Housing. To provide adequate housing facilities for urban populations by establishing house ownership and low cost housing schemes, to be financed by both local and external resources.

Programme

Town Planning. Since Independence three surveys have been undertaken by external professional agencies on urban growth in Sierra Leone. A National socio-economic survey forecasts continued growth patterns for Freetown, for Bo, Kenema and the Makeni-Magburaka area, and for Kambia, Kabala and the Bonthe-Moyamba area, in that order. Another report has sketched possible lines for Freetown's development.

During the Plan period Government will prepare a national urban development plan and building laws as well as detailed town plans for Freetown, Bo, Kenema, and Makeni. The town plans will cover land use and zoning, transport and traffic, community buildings and housing, utilities and services, schools and recreational areas, and the like.

In the preparation of these town plans as well as in their implementation the Ministry of Housing and Country Planning will play the co-ordinating role. Initially it will be largely dependent on foreign professional staff to plan and execute this programme, but during the Plan period Sierra Leonean staff will be trained for this work. Eventually regional centres will be established in each of the provincial headquarters.

Housing. Government will encourage through legislation and other action the promotion of housing schemes, generally to be financed and executed by private enterprise.

Freetown. With the influx of population into the capital, housing has become a problem in recent years. The demand for housing far exceeds supply, which has led to overcrowding, with all its related evils. Land is scarce and at a premium, so that the scarcity of adequate housing facilities affects not only lower income groups, but middle and higher income groups as well.

Tilley Housing Estate. This Government-financed scheme provides 1- to 4 room houses to the lower income group. Since 1958 370 houses with ancilliary services have been completed at a total cost of Le 406,788. Over the next five years it is proposed to build 140 houses at a cost of Le 320,268.

African Civil Servants Housing Scheme. Under this scheme, approved in 1952, 20-year loans of up to Le 4,000 are granted for construction of houses by Government servants. To date 121 loans have been granted totaling about Le 450,000. Provision is made for a total of 40 new houses 1966-70 at an estimated cost of Le 160,000.

Loan Scheme for Repair of Houses. Government approved a loan scheme in 1965 under which householders in the City of Freetown and Urban Areas can apply for loans to repair their houses. Provision is made for Le 12,000 annually to provide loan funds.

Development of Flats -- New England. It is proposed to develop flats at Brookfields to ease the housing situation for overseas staff and technical experts. The total cost of the project is estimated at Le 456,000.

Provinces.

Bo Housing Ownership Scheme. The scheme provides for the phased development of 400 acres of land, to include construction of 700 3- and 4-room houses, with ancillary services of roads, water, and electricity. The estimated cost of the construction of 160 houses 1966-70 is Le 480,880. Actual expenditure to date is Le 24,538 for five houses.

Makeni Housing Ownership Scheme. It is proposed to develop about 44 acres on the main Makeni - Magburaka Road in Northern Province. Unlike Bo, the site is near the existing township, with electricity and water mains only 200 yards away.

The development will include 72 plots of approximately half an acre each, on which will be constructed 72 3- and 4-room houses during the Plan period. Estimated cost of the scheme is Le 208,796; expenditure to date is Le 32,100.

Kenema Housing Ownership Scheme. In the Eastern Province a site of about 45 acres has been selected in a deforested area of Kenema. The estimated cost of the construction of 72 houses during the Plan period is Le 208,796, but no expenditure has been made to date. It is hoped to undertake the construction programme at Bo, Makeni, and Kenema simultaneously over a period of about five years.

Training of Staff

The need to provide an adequate number of trained staff to undertake physical planning at the national, regional, and local level has become rather urgent. Recruitment of suitable professional and technical staff has met with limited success. Efforts are being directed to the training of suitable indigenous officers to fill existing vacancies.

Various awards for training in all fields, both locally and overseas, exist, and consideration will be given to some propaganda work in schools and colleges so as to attract suitable personnel into the planning and housing fields.

Their is no reliable data about training in the private sector for architects, building surveyors, and town planners.

Training of Town Planning and Housing Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Professional Level			
Town Planning Officer		2	2
Architect		1	1
Building Surveyor		1	1
Sub-Professional Level			
Asst. Town Planning Officer	1		1
Asst. Architect	1		1
Technical			
Chief Building Inspector	1		1
Senior Building Inspector	2		2
Asst. Senior Building Inspector	1		1
Surveyors		4	4
Building Inspectors	12	5	17
Architectural Draughtsman	1		1

PRIVATE SECTOR:

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Finance

In the current financial year only Le 68,660 is provided for capital expenditure involving the housing projects mentioned above. It is therefore quite apparent that there is extreme shortage of funds for housing development as well as for urban renewal.

At present no outside agency is financing any of the housing projects. It is, however, proposed to introduce a house purchase scheme in the Western Area for lower and middle income groups, which might be financed by an external agency, supported by Mortgage Bank and Government guarantee.

Limited funds are provided in the form of loans to private individuals for the repair and reconditioning of old houses.

Proposed Plan Expenditure on Town Planning and Housing

In Leones

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Estimated Total
n Planning	2,000	4,000	10	10	10	6,030
ding						
Western Area						
Kissy HousingEstate	36,160	87,720	70,040	63,040	63,308	320,268
African Civil Servants HousingScheme	10,000	40,000	40,000	40,000	40,000	170,000
Loan Scheme for House Repair	12,000	12,000	12,000	12,000	12,000	60,000
Development of Flats -HowDingland		100,000	156,000	100,000	100,000	456,000
Provinces						
So House Ownership Scheme	10,400	114,020	125,220	115,220	115,220	480,880
Mabonl "	32,1000	44,107	56,719	37,919	37,951	208,796
Kenema "		47,320	67,155	47,155	47,166	208,796
TOTAL	102,660	449,967	527,144	415,344	415,655	1,910,770

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

II. H. INDUSTRY AND TRADE

Policy statement being prepared by Economic Policy Coordination Committee's subcommittee on Business Investment Policy

- 2 OCT 1965

II H. INDUSTRY AND TRADE CHAPTER (Con'd)

CO-OPERATIVE DEPARTMENT

On 30 June 1965 there were 765 primary and secondary co-operative societies in Sierra Leone. The societies are mainly rural thrift and credit societies and agricultural marketing societies. The secondary societies are unions of the primary societies, normally covering one chiefdom. The unions co-ordinate marketing facilities and methods, and provide a channel for direct exports (for example, piassava is exported from Bonthe by direct negotiation with agents in United Kingdom).

The Sierra Leone Co-operative Marketing Federation Ltd. is a federation of the marketing unions, and is an agent of the Sierra Leone Produce Marketing Board for the purchase of cocoa, coffee, and palm kernels. The Marketing Board purchases these crops for cash throughout the Eastern and Southern Provinces and rails them to Freetown for sale.

Development Programme

1. Co-operative Business Management School. A training centre has been in operation in Kenema since early 1961. It consists of one building, housing dormitory accomodation, bathrooms, and one classroom for 20 students. It has to date held 15 three-month courses for secretaries of co-operative societies. The course includes English, arithmetic, book-keeping, and cooperative studies, all at an elementary level, but sufficient to teach secretaries to maintain the books of simple rural thrift and credit societies.

There is an obvious and urgent need, if the movement is to continue to expand, for a comprehensive school which could turn out competent, fully-trained secretaries. There is also a need to train officers of co-operative societies in their duties, since much of the slow growth of the movement is due to lack of understanding by the officers of their functions.

The proposed school would include:

3 classrooms
2 male dormitories
1 female dormitory
1 dining/recreation hall with kitchen
3 staff houses

The estimated total cost of building and equipment for the school is Le 120,000. The following schedule of construction is suggested:

1966 Construction of 1 classroom, dormitory, dining/recreation hall and kitchen, and 1 staff house (Le 80,000). Syllabuses could be drawn up, working methods evolved, and trained staff recruited.

1968 Construction of 1 classroom and 1 female dormitory (Le 20,000).

1969 Construction of third classroom and male dormitory (Le 20,000).

2. Consumer Co-operative movement. A wholesale society should be established in Freetown, which can order and stock goods in bulk from overseas and locally, to be supplied to consumer societies in Freetown and upcountry, as well as for sale at wholesale rates to small private traders. The movement should begin with a small range of quick-moving, well-known goods, expanding as it takes hold. It is hoped that Government assistance in the form of protective legislation for certain staple lines reserved to the co-operatives can aid its implementation. Fresh vegetables and meat from Kabala, as well as locally produced cloth and other goods are to be included.

It is proposed that initially there shall be one retail shop in Freetown and one retail shop in each of five provincial centres. Upcountry retail shops will also sell at wholesale rates to small private village traders.

The initial capital expenditure proposed is approximately Le 500,000, as follows:

Provision of 7 buildings, with fixtures and fittings	Le 270,000
Stock in Trade	205,000
Vehicles	25,000

It is hoped in the course of the Plan to expand the movement into 12 provincial centres, at an estimated total cost of Le 850,000.

3. Fresh Meat and Vegetables Marketing. A start has already been made in supplying fresh vegetables from the Kabala area to Freetown. This project should be expanded so that the area can supply the entire needs of Freetown, as well as some upcountry towns. Cool rooms for storage are required, as well as rooms for grading, packing, and despatch. A proposal is also under consideration for slaughtering and freezing meat in Kabala, for shipment to Freetown by lorry or by rail from Makeni. It is suggested that the construction of the necessary installations be commenced in 1966, at an estimated cost of Le 60,000, with a further Le 10,000 budgeted for additional transport in 1968.

4. Sierra Leone Arts and Crafts. A centre in Freetown for the sale of locally-made and dyed cloth, raffia products and pottery is proposed as an incentive to the local arts and crafts industry which is being encouraged by the Small Industries Section of the Ministry. The 48-inch weaving loom already developed is now being used in training courses, and a new dyeing process developed under direction of the I.L.O. Expert is being taught. A retail outlet for these products should be located conveniently for both tourists and the local population. The present outlet in the Arts and Crafts Centre can be used temporarily; it is proposed that the building of the shop be budgeted for 1968 at an estimated Le 20,000, with the additional items (fixture and fittings, Le 2,500; one van for delivery and collection, Le 2,000; and capital for purchase of stock, Le 15,000) totalling approximately Le 19,500 budgeted in 1969.

5. National Co-operative Union. The co-operative society movement should be welded together by the establishment of a National Co-operative Union. A capital fund of Le 10,000 for its inception should be provided in 1967, to be supplemented by subscriptions made by the member societies.

Staff Training of Co-operative Personnel

Classification	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Field Staff			
Registrar	2		1
Deputy Registrar	1	1	2
Principal A. Registrar		1	1
Senior Asst. Registrar	2		2
Asst. Registrar	8		8
Co-operative Superintendent	2	2	4
Asst. Co-op. Superintendent	14		14
Co-operative Inspectors	66	[illegible] *	34
Training Staff			
Cooperative T. School			
Principal		1	1
Instructors	1	3	4
Field Training			
Asst. Registrar		1	1
A.C.S.		3	3
Co-operative Inspector		12	12
Audit Staff			
Asst. Registrar	1		1
Asst. Co-op. Superintendent		3	3
Co-op. Inspector	5	15	20
Co-operative Societies Staff			
Consumer			
General Manager	1		1
Accountant	1		1
Shop Managers	7	7	14
Storekeepers	7	7	14
Federations and Unions			
Secretary/Managers	12	20	32
Primary Societies			
Secretaries	179	421	600

* Staff classification to be reduced.

Proposed Plan Expenditure on Co-operative Department

In Thousands of Leones

	1966	1967	1968	1969	1970	Total
Co-operative Business Management School	80		20	20		120
Ten Acre Farms		5				5
Consumer Co-operative Movement						
Buildings, fixtures & fittings	270	50	50	50	25	445
Stock in Trade	205	50	50	25	25	335
Vehicles	25			25		50
Meat and Vegetable Marketing						70
Slaughterhouse, cold rooms, offices, utilities, etc.	30	30				
Transport			10			
Arts and Crafts Shop						39.5
Building			20			
Fixtures and Fittings				2.5		
Delivery van				2		
Capital for purchase of stock				15		
National Co-operative Union		10				10
Total	610	145	150	139	50	1,094.5

Njala University College. The Njala University College was established in 1964 as a successor to the Njala Training College and to the Department of Agriculture headquarters and research station located at Njala, miles east of Freetown. The project is being assisted by a team from the University of Illinois under the USAID programme. Njala Gives courses at four levels:

a. 4-year Bachelor's degree courses in agriculture, secondary teacher education, and home economics.

b. 2-year Certificate courses in the technical aspects of agriculture, in home economics, and in construction, metalwork, mechanical, electrical, and automotive trades.

c. An experimental primary school.

Its 10-year capital development plan 1965-74 calls for the initiation of additional activities:

d. 4-year Bachelor's degree course in basic sciences to start 1968.

e. 3-year Certificate course to train teachers of agriculture and crafts. To start in 1966.

f. An experimental secondary school, to start in 1967.

(See page 9 for present and future enrollment in these courses.)

In addition to its primary teaching function, Njala will continue and expand its research programmes and extension services. Research will be oriented toward solving immediate problems. This will provide the knowledge to be disseminated through an enlarged extension staff to every farm and home in Sierra Leone. (See Agriculture Chapter for description of Research and Extension activities.)

SECONDARY EDUCATION -- Con'd)	1964-65	1965-66	1969-70	1970-71
Technical Trades Schools				
Enrolment	400		1,800	
Teachers	30		110	
Buildings	3		9	
Agricultural Schools				
Enrolment	0		1,400	
Teachers	0		80	
Buildings	0		7	
SECONDARY TEACHER TRAINING (including Secondary Teacher Training at University level				
Alton Margai Training College				
Enrolment	70		250	
Staffing (proportion of total staff in relation to total enrooment)	6		21	
Buildings -- A new department for Secondary Teacher Training, including teaching accomodation and students residences for 250, plus staff residences.				
HIGHER EDUCATION (including Secondary Teacher Training at University level)				
Fourah Bay University College				
Enrolment	549		837	
Arts	255		450	
Economic Studies	176		178	
Pure & Applied Science	118		209	
Njala University College				
Enrolment				
Degree	61	95	260	313
Agriculture	40	64	108	122
Education	17	27	111	129
Home Economics	4	4	18	25
Basic Sciences	-	-	23	37
Certificate -- 2-year	40	70	119	131
Agriculture - General	34	49	57	62
Agriculture - Trades & Crafts	6	9	27	30
Home Economics	-	12	35	39
Certificate -- 3-year				
Teachers Training - Agri. & Crafts	-	-	60	53

(HIGHER EDUCATION -- Con'd)	1964-65	1965-66	1969-70	1970-71
Ujala University College -- Con'd				
Enrolment				
Experimental Secondary School			305	376
Experimental Primary School	488	500	513	507
Total Enrolment	653	761	1,315	1,447
Teaching Staff				
Senior Staff	58	89	152	159
Junior Staff	174	218	337	355
Buildings				

Targets for Building Programme 1965-70

Primary Education -- New Classrooms	2,350
Primary Teachers Training Colleges	
From Government Funds:	
New buildings for existing colleges	3
Extension of existing colleges	3
From Proprietors Funds:	
New building for a new college	1
Extension of existing college	1
Secondary Education	
General	
From Government Funds:	
Extensions of existing schools	31
New schools	11
From Proprietors Funds:	
Extensions of existing schools	1
New Schools	5
Technical Institute Freetown	
Extension Technical Institute	
New building for Commercial Section	
Secondary Technical Schools	
Replacement of Freetown Secondary Technical School	1
New Schools	4
Technical Trades Schools	
Extensions	3
New buildings	6
Agricultural Schools	
Establishment of new schools	7

Secondary Teacher Training

Milton Margai Training College — A new department for Secondary Teacher Training, including teaching accomodation and students residences for 250, plus staff residences.

(Con'd)

(Targets for Building Programme 1965-70 -- Con'd)

Higher Education

Fourah Bay University College

Njala University College

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

I. EDUCATION CHAPTER goes here

22 OCT 1955

S. HEALTH CHAPTER

Objectives, Targets, and Strategy

Objectives. Realising that improvement of health and economic development are inter-dependent, the Plan proposes to provide the curative and preventive services required for the nation's health and to create all those basic and environmental conditions which are conducive to healthy living. These necessary health services shall be made available to a steadily increasing proportion of the population as the financial capacity of the Government permits.

During the five years ahead the Ministry of Health plans:

1. The promotion to the highest level of health of the total population by the most modern skills and techniques.
2. The expansion of the medical and health care facilities to provide a better coverage of the population by a programme of improvements and extensions to existing facilities as well as construction of new facilities.
3. The provision of additional qualified staff to service these facilities by good training programmes, involving some construction of educational institutions.
4. A reduction in maternal and infant mortality by the strengthening and extension of maternal and child welfare benefits.
5. Increasing preventive action to combat the major existing communicable diseases, i.e., malaria, tuberculosis, smallpox, measles, whooping-cough, tetanus, and leprosy.
6. Improvement in the efficacy of the health services by re-organisation , expansion , and other changes.
7. Co-ordination of these health activities by co-operation with other ministries such as Agriculture, Education, Housing and Country Planning, Information, Local Government, Social Welfare, and Works.

Strategy. To attain these objectives the Plan proposes the following practical measures within the resources available:

Medical Care. Improvements, extensions and renewals of existing hospitals and out-patient departments, and increased numbers of rural treatment (health) centres to take care of the needs of the existing and of future population.

Public Health Services. The provision of health education, both direct (i.e., by Ministry personnel to the population) and indirect (i.e., by the provision of information and services to such groups as school teachers, missions, co-operative and social workers, agricultural extension workers, voluntary agencies, etc.) Every patient under medical care will be taught health education before and during treatment.

The enhancement and further expansion of the maternal and child health services, including school health services. Nutritionists will study the foods available and their relative nutrient content, making recommendations on their use.

The control of major communicable diseases mentioned above.

The expansion of environmental health measures including sanitation, water supplies, refuse and sewage disposal, housing etc. In particular the implementation of a Sewage and Storm Drainage Plan for Freetown and the extension of house-to-house collection of refuse in Freetown. More public conveniences will also be constructed in Freetown.

Medical and Para-Medical Education. The establishment of a school for the training of existing, and newly categorized, para-medical personnel in 1966.

The establishment of a WHO standard Nurses Training School in 1966.

Development of a long-term programme for the undergraduate training of nurses, midwives, Health Inspectors, technicians, etc.

The transfer of the Health Inspectors Training School from Bo to Freetown.

Development of a long-term programme for the post-graduate training of nurses, midwives, Health Inspectors, technicians, etc.

- 1 DEC 1965

The ultimate establishment of Medical and Dental Faculties at the University of Sierra Leone.

Organizational. Reorganization of the Ministry of Health, including the establishment of a Planning Unit, a Vital and Health Statistical Unit, an Epidemiological Unit, a Nutritional Unit, and a Health Education Unit; and as soon as practicalbe further decentralization of administrative responsibility to, and through Provincial to District level.

Targets. In physical terms to provide the following minimum facilities and services to achieve the Plan's goals. The Ministry of health has divided its targets into two parts: those that can be financed largely from domestic resources and those that can be financed if an addendum is provided from external sources.

	1969 Private	1969 Govt	1971 Govt Target Regular	1971 Govt Target Addendum
Medical Care:				
Base Hospitals (Freetown)		7	7	
Base Hospital beds		687	910	
District Hospitals		13	13	
Provincial & District Hospital beds		660	935	
Mission Hospitals	7		7	
Mining Company Hospitals	4		4	
Health Centres		23	28	38
Health Centre beds				
Health Units		68	176	191
Dispensaries		27	107	
Treatment Centres		39	64	
Out-Patient Centres		-	5	
Staff Training (of Government Personnel only)				
Doctors	78	66	130	
Dentists	2	7	13	
Pharmacists	8	1	1	
Dispensers	n.a.	86	109	
Nurses	n.a.	265	357	
Midwives	n.a.	50	83	
Medical Auxiliaries	n.a.	0	36	

Public Health Services	1965	1970
Health Centres (including MCH, TB, etc.)	(See Medical Care above)	
Health Sub-Centres		
Staff		
Medical Officers of Health	1	12
Chief Public Health Nurse	1	1
Provincial Public Health Nurses	0	4
Senior Public Health Nurses	2	12
Public Health Nurses	8	13
Chief Public Health Inspector	1	1
Provincial Public Health Inspector	4	4
Senior Public Health Inspector	6	11
Public Health Inspector	70	108
Midwives (Community Nurses)	8	28
Village Maternity Attendants	300	400
Medical Education - Trainees		
Doctors (trained abroad)	38	
Dentists (trained abroad)	3	
Dispensers (Medical Assistants)	0	24
Nurses	16	20
Midwives	3	6
Public Health Inspectors	4	12

Programme

The programme to be undertaken during the Plan period is designed to move with optimum speed towards the goals set forth above.

Medical Care. Medical care is presently provided in the country through a system of hospitals, clinics, rural health centres, dispensaries, and treatment centres.

(Medical Care - con'd)

Hospitals. There are 7 hospitals in Freetown and 13 hospitals in the Provinces; that is, 1 for each of the 12 districts and 1 at Lungi Airport. In addition, there are 7 hospitals operated by medical missionary organizations and 3 hospitals operated by mining companies. All these hospitals are in need of modern equipment and physical improvements and expansions.

The present ratio of hospital beds to population is approximately 1 : 1,000, which is inadequate. The aim is to increase this to at least 2 : 1,000 in the foreseeable future, bearing in mind also that the population is increasing at approximately 3% per annum (i.e., 50,000 to 60,000) and this increase will have to be taken into consideration.

Thus improvements, extensions, and replacements of existing facilities constitute the main preoccupation of the Plan with regard to hospitals. In Freetown there is to be a major up-grading of Connaught Hospital. The Princess Christian Mission is to have a new maternity wing. The Children's Hospital is to be expanded and two clinics for children under 5 to be established. Three new out-patient centres are to be built.

In the Provinces, the Kailahun and Pakoni hospital buildings are to be reconstructed. Additional space and equipment are to be provided at the Bo, Bonthe, Kabala, Kambia, Kenema, Koidu, Lokka, Lungi, Magburaka, Moyamba, Port Loko, and Pujehun hospitals. These additions will permit these hospitals to provide greater facilities for maternity and child welfare, TB surgical, out-patients laboratory, dental, X-ray, and other types of treatment. (Proposed expenditures on hospitals and other health facilities and services are listed at the end of this chapter.)

Health Centres, Dispensaries, and Treatment Centres. In addition to the base and provincial hospitals, there are 23 government health centres which provide out-patient care; 41 dispensaries including 14 mission and 3 mining dispensaries; and 39 treatment centres connected with the Endemic Diseases Control Unit. The District Medical Officer is responsible for the supervision of the network of health centres, dispensaries, and treatment centres in his district.

These centres often have inadequate supplies and equipment and some staff members only partially trained. The distance between the homes of persons requiring medical attention and the available medical care units considerably restrict the present use of these services by the population. Hence the Plan proposes not only improvement of existing facilities, but calls for the construction of 20 additional rural health centres, of 10 additional treatment centres, and of 59 additional dispensaries, thereby providing a health unit for each of Sierra Leone's 145 chiefdoms.

Other Facilities. There are school clinics in Freetown, dental units in Freetown, Bo, Kenema, and Magburaka, 4 mobile units (X-ray, Rehabilitation, Blind, and Health), and laboratories at the hospitals and health centres. Maternal and child welfare services are provided at the hospitals and health centres. A gradual expansion of these services is provided in the Plan.

Public Health Services.

Control of Endemic and Communicable Diseases. As mentioned above, a centralized Epidemiological Unit will be set up at Ministry level which will, with appropriate decentralization, supervise and control the communicable diseases. The Plan aims to expand it as follows:

a. Malaria. Over the years there have been routine measures taken, mainly in the Freetown area, to control malaria

and yellow fever. A WHO team arrived in 1964 to survey, plan, and recommend an eradication programme. If such is acceptable and feasible, a pre-eradication programme (which includes training, a demonstration area, etc.) will be commenced when funds are available.

b. Tuberculosis. Control is limited to a Chest Clinic at Connaught Hospital in Freetown. There is also the Lakka Chest Hospital. There is a specialist and a medical officer attached to the service. Patients from anywhere in the country are referred to them when necessary. Treatment should be provided at every health unit where there is a District Medical Officer on an out-patient basis. The service officers should tour the country to review cases.

c. Leprosy is combatted through treatment facilities at several mission hospitals and dispensaries. There is a leprosarium at Masanga, now operated by the Seventh Day Adventist Mission, where more than 100 patients can be admitted. Yet only a small proportion of cases receives treatment. Every health unit should have a leprosy clinic to give treatment. The leprosarium should only admit cases which cannot be treated as out-patients.

d. Smallpox. Up to now there has been no specific organisation for the eradication of smallpox, although some vaccination is done at all health units. An increased vaccination programme is planned for early implementation.

e. Whooping Cough and Tetanus. Immunisations against smallpox, whooping cough, measles, and tetanus can be carried out simultaneously.

f. Measles is a disease which causes much havoc and child mortality. Trials of a new type vaccine have been in progress during the latter half of 1965 and it is hoped that a mass immunisation programme will be commenced in 1966.

- 1 DEC 1965

(Public Health Services -- Con'd)

Maternal and Child Welfare. Sierra Leone has high morbidity and mortality rates among infants and young children and mothers in rural areas. The Plan envisages an expansion of services and facilities for ante-natal care, attendance during labour, and post-natal care of mothers. Child Welfare Clinics are to be established outside Freetown, in most instances in conjunction with other Health Centre activities.

Health Education. Increasing attention will be given to educating mothers and children in balanced nutrition and all citizens in personal and family hygiene.

School Health. A course of health education is given in primary schools. It is desired to give medical inspections to all children upon entering and on leaving school. Such inspection will include general medical examinations, dental examinations, and examinations for visual defects and defective hearing. This will provide opportunity for the diagnosis and treatment of individual defects in children at an early age. For this purpose more Public Health Nurses and dental hygienists will be trained. In due course a school dentist service should be introduced. In rural areas this service will be handled by the Health Centre, but the service will also be taken to the schools in numerous instances by the health staff.

Environmental Sanitation. The basic point of attack in public health preventive measures is environmental sanitation. The Ministry of Health must provide leadership to other ministries and to local authorities to improve local sanitary conditions.

Community Water Supply. Work is underway to provide Freetown and 31 provincial towns with regular supplies of water throughout the year. (See Water Resources Chapter.)

Sewage Disposal. There is no central water-borne sewage system anywhere in Sierra Leone. Some sections of Freetown have adequate unit disposal systems, but elsewhere in the country such systems are lacking. Local authorities should be encouraged to assume some of the responsibility for sewage and refuse disposal.

Housing. Throughout the urban aggregations of the country the housing situation is acute, with consequent multiplication of disease. There is a particularly high degree of overcrowding in Freetown and Bo. Shortage of capital, both private and public, has retarded construction of low cost housing. (See Town Planning and Housing Chapter.)

Medical Education. While Sierra Leone is more fortunate than some African countries as regards medical personnel, the existing complements do not meet the requirements of the country. Of the 147 doctors, less than half are national. The grade of auxiliary to the doctor, called medical assistant in some countries, has not yet been employed. Steps are now being taken to create this grade. There are similar difficulties in other categories; the dearth of trained nurses is particularly marked.

One of the major objectives of the Plan is to redress these serious difficulties. In order to consider how this may be done, it is nococcary to review the training arrangements for these several categories of personnel. A Health Education Unit will be established within the Ministry of Health to oversee the implementation of this medical education programme.

The Plan envisages the development of health personnel in Sierra Leone in the following categories:

Medical Practitioners and Dental Surgeons. The present availability of doctors to the existing population is of a ratio of 0.32 to 10,000. This should be raised to 1.0 to 10,000 as soon as practicable and further improved thereafter.

For some years training outside Sierra Leone must be continued, but the establishment of a Medical Faculty must be considered in long-term planning. It should be possible to establish the Faculty and take in medical students by 1974, with the first graduates in 1980. With attrition, retirements, expansion in services, the requirements of the medical faculty, etc., an annual turnout of at least 40 to 50 doctors from 1980 could be absorbed.

Medical Assistants. An auxiliary corps of medical assistants is to be created at the sub-professional level. These auxiliaries will supplement the work of the doctors and

dentists. This auxiliary personnel would work under the supervision of a doctor in the rural health centres and dispensaries, where both medical care and health promotion services are provided. Thus the auxiliary should have training in basic diagnosis, basic nursing procedures, health education methods, basic preventive health and prophylactic measures, and sufficient dispensing knowledge to keep and use stocks of simple drugs. They should be "multi-purpose" as well as stationary drugs. Similarly, dental hygienists are needed to assist dentists and independently to undertake simple dental prophylactic measures at their health units.

Hence the Plan calls for the establishment of a Medical Assistants School in Freetown, with residential and teaching facilities, to give the type of training described above.

Pharmacists and Dispensers. These are not currently being trained in Freetown and the numbers required do not justify a special school. The auxiliary to the pharmacist is at present a nurse/dispenser. He is to be replaced by a dispenser receiving an ad hoc course in Freetown in pharmacy and dispensing. The new type of dispensers will work only under the supervision of professional pharmacists. At smaller installations the Medical Assistant of the future will handle the dispensing of drugs.

Nurses. Hitherto a large proportion of ward sisters has been trained overseas, although 5 training schools have been in existence in Sierra Leone for several years. Unfortunately and for various reasons, the standards reached have not been as high as could be wished. A new National School of Nursing has been established temporarily in Murray Town, with a clinical practising area in selected wards of Connaught Hospital. The existing Bo School, and also the mission hospitals at Segbwema

and Serabu, shall in the future be used to train nursing auxiliaries. For the foreseeable future specialist nurse-training will need to be obtained (other than training in infectious diseases now being done at Lakka).

Midwives operate under Government control. Trainees undergo 12 to 18 months at six different hospitals. Training courses are steadily being improved, thus leading to progressive raising of practice standards.

Health Inspectors receive at present a 3-year course of instruction at Bo. The curriculum is based on the Royal Society of Health syllabus. Their duties include environmental, sanitary, and health education, nourishment, supervision of communicable disease control. Assistant Health Inspectors undergo a 1-year course and work as auxiliaries to the Inspectors.

It is planned to move the Health Inspectors School to Freetown where there is a larger urban practice field.

- 1 DEC 1965

Medical Education Targets for Government Personnel

	Present Staff Availabilities	To be Trained	1971 Staff Requirements
Medical Practitioners			
Doctors	66	64	130
Dentists	7	6	13
Medical Auxiliaries	0	24	24
Dental Auxiliaries	2	4	6
Pharmacists and Dispensers			
Pharmacists	1		1
Dispensers	86	23	109
Nurses			
Nurses (incl Public Health Nurses)	265	92	357
Community Nurses	8	20	28
Midwives	50	33	83
Village Maternity Attendants	300	100	400
Health Inspectors			
Chief, Provincial and Senior	11	5	16
Inspectors	70	38	108
Technicians			
X-ray		3	3
Radiology		1	1

- 1 DEC 1965

Proposed Plan Expenditure on Health

In Leones

Project	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Medical Care:						
Base Hospitals (Freetown)						246,000
Connaught	110,000		100,000			
Princess Christian Maternity Hospital		30,000	30,000			
Childrens		6,000				
District Hospitals						165,000
Kabala				15,000		
Kailahun	30,000			30,000		
Kenema		15,000				
Makeni		30,000		30,000		
Port Loko			15,000			
Health Centres (1 per year)	24,000	24,000	24,000	24,000	24,000	120,000
Health Units .						
Dispensaries (15 per year)	48,000	48,000	48,000	48,000	64,000	
Out-Patient Centres (1 per year)	22,000	22,000	22,000	22,000	22,000	458,000
Treatment Centres (5 per year)	16,000	16,000	16,000	16,000	16,000	
Public Health Services						
Medical Education						
Medical Assistants School	194,000	20,000				214,000
S.R.N. Nurses Training School	100,000	100,000				200,000
Natl. Health Lab.			39,000	39,000		78,000
Total	544,000	311,000	264,000	224,000	126,000	1,481,000

HEALTH CLAIMS

- 1 DEC 1965

Addendum Plan Expenditures
(To be Financed From External Sources)

In Leones

	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Medical Care:						
Base Hospitals						
Connaught	189,000	390,000	877,000	223,000		1,679,000
Princess Christian Maternity Hospital	40,000	40,000	40,000			120,000
Childrens	50,000	50,000	50,000	50,000	50,000	250,000
District Hospitals						
Operating Theatres	50,000	55,000	55,000	55,000	55,000	270,000
Childrens Clinics	24,000	24,000	24,000	24,000	24,000	120,000
Wards	8,000	8,000	8,000	8,000	10,000	42,000
Dental & X-ray Blocks	20,000	20,000	20,000	20,000	20,000	100,000
Chest Clinics & Isolation Wards	20,000	20,000	20,000	20,000	20,000	100,000
Clinical Laboratories	20,000	20,000	20,000	20,000	20,000	100,000
Miscellaneous Items	20,000	4,000	15,000			39,000
Housing	40,000	40,000	40,000	40,000	40,000	200,000
Transport	5,000	5,000	5,000	5,000	5,000	25,000
Laundry & Kitchen Blocks	40,000	40,000	40,000	40,000	40,000	200,000
Health Centres (2 per year)	51,000	51,000	51,000	51,000	51,000	255,000
Health Units (3 per year)	10,080	10,080	10,080	10,080	10,080	50,400
Total	587,000	777,080	1,275,080	566,080	345,080	4,000,400

II K. SOCIAL WELFARE CHAPTER

The Ministry of Social Welfare is concerned with the social welfare needs of various communities throughout the country. Its activities therefore embrace social development, mass education and community development, welfare services, youth clubs, institutional care of juvenile delinquents, approved schools, probation system, port welfare, relations with religious bodies, cultural development, sports, prisons and after care of prisoners. The Ministry's aim is to achieve as much success in its efforts as possible within the limits of the funds available, and it is hoped that in the next five years increasing internal and external aid will be forthcoming for the purpose.

Programme

1. Community Development -- The Improvement of the Life of the Rural Population. Technical training for Community Development Workers in the Provinces under a United Nations Community Development Engineer will continue, and Community Development Overseers will be appointed to assist the Engineer in training Community Development Workers. The training will include the building of roads and bridges, laying of water supplies, the erection of public buildings, etc., on which the trainees will work with the assistance of the village people. The Community Development Engineer and Overseers will deliver lectures to the village people on village planning, hygiene, elementary geometry and community development.

2. Self-Help Projects -- Pilot Villages. The Pilot Village Development Shame which was launched in 1963 has been successful. Nine pilot villages have been established in the Eastern

Province of the country as follows:

Kenema District	5 Pilot Villages
Kailahun District	3 Pilot Villages
Kono District	1 Pilot Village

These pilot villages have been organised and directed by the Ministry's staff to solve the villages' needs in various ways, e.g., improving their water supplies, improving the physical condition of their homes and surroundings (kitchens, latrines, etc.), adopting better nutrition methods for themselves and their children, organising women's groups to facilitate the nutrition programmes. These activities necessitated a lot of planning and consultation from the provincial level right down to the village level, thus making the village people identify themselves with every progress that took place. The nine villages listed above stand out distinctly as places where community development has been fully grasped and undertaken by the people themselves, and not imposed on them from above by some higher authority. It is intended to set up more pilot villages in the Provinces.

3. Family Nutrition and Home Development Programmes. The Family Nutrition and Home Development Programme which came into operation in 1961 with substantial financial assistance from FAO/UNICEF, continues to be very popular. Knowledge about family nutrition and home improvement has been disseminated to the rural population and they have been shown how this knowledge can be used to improve their own welfare.

Subject to FAO/UNICEF/WHO's agreement and the availability of funds, the Programme will be extended to all parts of the country in the next five years. In carrying out the Programme emphasis will be laid on training and seminars to support an active field programme. Training and refresher courses will be held for staff employed by the Ministry, community development

workers and voluntary leaders. Assistance in teaching subjects in health, education, nutrition, agricultural extension services, etc., will be given by qualified experts made available by the Ministries concerned.

It is hoped that members of the staff of the Ministry will be awarded followships overseas, ranging from six weeks to a year, in Home and Community Development, Extension in Agriculture and Home Economics, and Nutrition Education under the Joint FAO/UNICEF/WHO Training and Technical Assistance Programmes.

4. Social Welfare Centre at Bo. This Centre, costing Le 10,640 and made up of a classroom block containing four classrooms and two duplex apartments, has been in regular use since it was erected and opened in 1958 for the training of Community Development personnel, but it is totally inadequate to meet present requirements, e.g., the execution of the Home Development Programme in respect of which the Government of Sierra Leone entered into an agreement with FAO/UNICEF etc. in 1961. Adequate land is available for the erection of additional buildings, and it is likely that external aid will be forthcoming to meet part of the cost of erection, which is estimated at Le 30,000.

5. Adult Literacy. The Ministry of Social Welfare and the Provincial Literature Bureau, Bo, have been mainly responsible for literacy campaigns in the principal vernaculars throughout the country.

The eradication of illiteracy in Sierra Leone is a matter which has been under constant review in the Ministry, and at its request Government has recently agreed to/a Committee for Mass Education to look into the matter. The Committe comprises representatives of the Ministries concerned, the Provincial Literature Bureau, University Colleges, religious bodies

and voluntary organisations. External aid will be sought to launch literacy campaigns throughout the country. The estimated total cost for the five-year period will be Le 9,932,150.

6. Sports. The Sierra Leone Amateur Sports Council Act has been repealed and replaced by the National Sports Council of Sierra Leone Act. Under the new Act a National Sports Council has been established for the purpose of promoting and encouraging the development of sports. Sierra Leone wishes to keep abreast of other countries in Africa. The Council is a corporate body and has an executive body known as the Management Committee. There is provision in the Act for the establishment of Regional Sports Committees in the Western Area and in each of the three Provinces, and steps are being taken to establish these Committees. Provision is also made for a Director of National Sports; an appointment has already been made.

Proposals for the development of sports include the following:

a. Building a National Sports Stadium in Freetown	Le 2,000,000
b. Development of, and improvements to, the present Sierra Leone Football Association Grounds	30,000
c. Erection of a Cricket Oval for National and International Matches	20,000

It is essential that the proposals listed above should be implemented within the next five years if the development envisaged in this connection is to become a reality.

Expert coaches in football, cricket, athletics and boxing will also be required, because without intensive and systematic training, sports cannot be developed in this country. Provision of Le 24,000 is therefore included in the Plan for an expert coach in each sport.

7. National Cultural Development. In order to preserve the enormously rich cultural heritage of Sierra Leone, Government has agreed to the formation of a National Dance Troupe comprising 60 Sierra Leone dancers, musicians, drummers and singers. The Troupe participated in the Commonwealth Arts Festival in Great Britain from 16 September to 2 October 1965. Sierra Leone dancers also participated in the New York World's Fair in 1964 and won international fame for their splendid performances.

It is proposed to raise three Troupes:

1. one International Class Troupe for world theatrical commitments,
2. one National Class Troupe for domestic, tourist, and other national attractions, and
3. one provincial troupe that will act as a feeder troupe to the other two.

The first troupe will comprise fifty dancers, musicians, drummers and singers, and five officials, with an estimated total annual cost of Le 100,000. The second troupe will comprise forty-five dancers, musicians, drummers and singers, and three officials, and will cost an estimated Le 80,000 annually. The third troupe will be thirty-six artists and three officials, with an estimated annual cost of Le 60,000. In due course the three troupes should be permanently housed in a cultural village, the total estimated cost of which is Le 100,000.

8. Rehabilitation Services. The two principal rehabilitation services with which the Ministry is concerned are the Probation System, and the Approved School with its ancillary, the Remand Homes at Freetown and Bo.

The Probation System makes it possible for a juvenile delinquent to be put on probation with an approved guardian for a period ranging from one year to three years, instead of being given institutional treatment. From April 1961 to March 1965, 240 boys and 20 girls were put on probation by the Juvenile or Magistrates' Courts.

The Approved School for Boys, which has been in existence for 18 years, continues to reform juvenile delinquents who would otherwise lapse into habitual criminality. Between 1953 and 1964, 414 juveniles were discharged from the School. While serving their sentences at the Approved School, juvenile delinquents are taught arithmetic, English, geography, history and civics up to the primary stage, and various trades (woodwork, metal work, agriculture). Efforts are made to get those who pass the Common Entrance Examination into secondary schools, and suitable employment is found for the others. Of the 414 mentioned, 174 have been admitted into primary, secondary, and technical schools, and 240 have been found employment.

It is clear that the Approved School is justifying its existence, but at present almost all the buildings are in a very bad state of repair. An inspection has been made by the Ministry of Works, which recommends a complete re-development scheme starting with the Staff Block and Latrine Block, continuing until the whole school is re-built. Top priority should be given to this, at an estimated cost of Le 48,000.

The Remand Homes are still used for the remand of juveniles awaiting trial in the various Juvenile or Magistrates' Courts. The buildings being used at Freetown and Bo are unsuitable and on the verge of collapsing. New buildings should be erected, at an estimated cost of Le 30,000.

The Approved School for Girls. No such school exists now. Lack of facilities for the effective handling of delinquent girls has been a concern of the Juvenile Court Magistrates for many years and has resulted in a large number of these girls becoming recidivists. It is the Ministry's view that a girls' school should be erected, at an estimated cost of Le 30,000.

9. Youth Camps. It is proposed to establish Youth Camps for young unemployed and non-school-going boys who congregate at public places and make a nuisance of themselves. These youths would be taught arts and trades and receive military training to make them useful citizens. It is planned to commence one Youth Camp in the Western Area, preferably at Jui. If the experiment proves successful, similar camps will be established in the Provinces. The estimated cost of running the camp in the first year is Le 50,000, as follows:

Erection of Youth Camp	Le 20,000
Tools for training in various trades	2,500
Equipment for physical training and Army drill	2,500
Furniture and general equipment	4,000
1 Chief Camp Officer	1,320
2 Camp Officers	1,680
1 Trade and Drill Instructor	800
2 Trade Instructors	1,200
1 Clerk	300
2 Cooks	600
1 Camp Messenger	288
1 Camp Watchman	262
Clothing	375
Feeding	10,000
Transport and Maintenance	3,600
Upkeep of camp	360
Contingencies	500
	Le 50,285

10. Prisons. There is no doubt that existing prison facilities are inadequate, seriously overcrowded, with prisoners not gainfully employed.

The Freetown Central Prison is old, out-dated, badly situated (only a mile from the town centre), at all times overcrowded, and does not afford facilities to practice penal reform.

A new prison to replace the Freetown Central Prison should be constructed at least ten miles outside the boundary of Freetown. A suitable site is to be provided by the Ministry of Lands, Mines and Labour and the Ministry of Housing and Country Planning in consultation with the Ministry of Social Welfare. The new prison should have accomodation for 1,500 prisoners, should include trade training shops and ample land to farm, and be constructed so as to afford segregation and classification. Its estimated cost is Le 2,000,000.

Existing prison accomodation and facilities in the Provinces should also be renovated and expanded, at an estimated cost of Le 100,000 per annum for four years (total Le 400,000), commencing with financial year 1966/67.

Staff Training

Education and Training in Social Welfare Work. It is expected that during the five-year Plan period selected officers from the Ministry will receive training, either long or short courses, in institutions or colleges overseas, hopefully financed by overseas governments under their different aid schemes. These courses would be either basic training for newly appointed officers or refresher courses for experienced officers in such fields as community development, etc.

It is also hoped that members of junior staff with the necessary entrance qualifications will be able to pursue the two-year certificate course in Home Economics at Njala University College.

Training of Social Welfare Personnel

Classification of Personnel	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Professional & Administrative Staff			
Social Development Officers	5	6	10 *
Assistant Secretary	1	2	3
Social Development Assistants	16	42	30 *
Head Teacher, Approved School	1	2	
Teachers	3	6	9
Sub-Professional Staff			
Social Development Workers	25	20	40 *
Community Development Overseers	10	25	30 *
Wardens, Remand Home	2	1	2 *
Dispenser/Warden	1	1	2
Matrons	3	2	4 *
Nurse/Matron	1	1	2
Nurses	4		4
Ward Attendants	18	9	25 *
Assistant Wardens	2	4	5 *
Duty Officers	6	7	12 *
Senior Trade Instructor	1	1	2
Trade Instructors	3	8	10 *
Instructor, Farmcraft Centre for Blind	1		1
Executive and Clerical			
Executive Officer		2	2
Sub-Accountant		1	1
Staff Superintendent		1	1
1st Grade Clerk	1	1	1
Clerks	12	13	25
Store Clerks	2	3	5
Driver/Operators	5	3	8

Proposed Plan Expenditures on Social Welfare

Project	1965-66	1966-67	1967-68	1968-69	1969-70	Estimated Total
Social Welfare Centre, Bo**		15,000	5,000	5,000	5,000	30,000
Adult Literacy	1,318,950*	2,153,300	2,153,300	2,153,300	2,153,300	9,932,150
National Sports Stadium, Freetown		1,000,000	340,000	330,000	330,000	2,000,000
A.L.Football Men's Grounds, Mag Ton		15,000	5,000	5,000	5,000	30,000
National Cultural Village for Natl Dance Troupe		50,000	20,000	15,000	15,000	100,000
Approved School for Boys		24,000	8,000	8,000	8,000	48,000
Approved School for Girls		15,000	5,000	5,000	5,000	30,000
Remand Home, Freetown		7,500	2,500	2,500	2,500	15,000
Remand Home, Bo		7,500	2,500	2,500	2,500	15,000
Youth Camp		50,000	22,000	24,500	26,000	122,000
New Prison, Western Area		1,000,000	340,000	330,000	330,000	2,000,000
Renovation of Provincial Prison Facilities		100,000	100,000	100,000	100,000	400,000
Cricket Oval		10,000	3,400	3,300	3,300	20,000
Coaching Staff		6,000	6,000	6,000	6,000	24,000

*Provision including capital cost for half year only. It is expected that much of the money required will come from external aid.

**Possibility of external aid will be explored.

Source: Ministry of Social Welfare.

Statistics on Social Welfare Facilities and Services

	1961-62	1964-65	1969-70
aff			
Social Welfare Staff	83	136	220
Prisons	431	496	978
cilities			
Community Centres	4	11	14
Social Centres (Dancing Halls, etc.)	40	56	80
Youth Hostels			
Home Economics Centres		4	5
Rehabilitation Centres:			
Approved Schools	1	1	2
Remand Homes	2	2	2
Probation Service	4	4	4
King George VI Memorial Home, Kissy (Old People's Home)	1	1	1
Mass Education (Adult Literacy)	4	4	4
←Voluntary Organisations	330	360	385
S.L. National Dance Troupe			3
Youth Camp			1
Sports:			
Sports Stadium	1	1	2
Football Grounds	4	4	9
Cricket/Football/Athletics Grounds	22	38	50
Prisons	17	17	17
ople Served By:			
Community Centres	89,700	97,000	112,000
Social Centres	150,440	240,000	300,000
Youth Hostels			
Home Economics Centres		5,210	12,200
Rehabilitation Centres			
Approved Schools	99	152	450
Remand Homes	290	366	700
Probation Service	120	181	300
King George VI Memorial Home, Kissy	150	152	220
Mass Education (Adult Literacy)	5,564	10,205	20,500
Voluntary Organisations	49,000	60,380	70,000

	1961-62	1964-65	1969-70
People Served By (con'd)			
S.L. National Dance Troups			2,000,000
Youth Camp			100
Sports:			
Sports Stadium	20,000	30,000	100,000
Football Grounds	16,000	40,000	90,000
Cricket/Football/Athletics Grounds	30,000	60,000	110,000
Prisons	12,163	17,178	15,760

25 OCT 1965

L. INFORMATION AND BROADCASTING CHAPTER

The successful implementation of any plan of economic and social development depends partly on a proper understanding of the needs of the country. The Ministry of Information and Broadcasting is geared to the projection of government and other activities to the people of Sierra Leone and to the world at large. The Ministry does project abroad as well as within the country the activities of Sierra Leoneans by means of sound and television broadcasts, the preparation of publicity material, and constant liaison with departments of Government and visitors overseas.

The integrated Ministry of Information and Broadcasting embraces the Government Information Services, which is a division of the Ministry. Departments which are not fully integrated within the Ministry are the Government Printing Department, the Sierra Leone Broadcasting Service, and the Sierra Leone Television.

Programme

Building. The present Ministry headquarters are in a temporary building which is not suitable for its activities nor adequate to cope with the volume of work. There is urgent need for a centrally located building in Freetown to house both the Administrative section and the Government Information Services. The estimated cost of such a building is Le 150,000.

There is also an urgent need for modern Information Centres at Bo in the Southern Province and Makeni in the Northern Province. These provincial centres would cost about Le 40,000 each.

Information Services. The Government Information Services is made up of Information, Publications, Photographic, Cinema and Film Production Sections, all geared towards the projection of Sierra Leone and its activities both locally and abroad. Each

are in need of additional equipment in order to improve their performances:

The Information Section needs a telex, a modern teleprinter, and estate cars operating from each provincial information centre.

The Photographic Section needs equipment such as replacement cameras, printing equipment, engraving equipment, at an estimated total cost of Le 25,620.

The Cinema Section needs 16 film rovers, one in each of the Districts in the Provinces and 4 for the Western Area, to be used for showing both local and overseas films throughout the country. Estimated cost of the 16 film rovers is Le 80,000.

There is also a need for a Film Library in the Cinema Division. An estimated annual expenditure of Le 800 would provide educational, cultural, and entertainment films for school and the general public.

Government Printing. The Government Printing Department is unable to cope in its present quarters with the ever-increasing demand for stationery, books, etc. A site for a new Printing Press in Freetown is now available and plans have been drawn for its erection. The estimated cost is Le 816,000.

If the press is set up, the Government would save considerable expence through local manufacture of exercise books, ledgers, registers, envelopes, primary school text books, and large security jobs.

Provincial Printing Centre. Expanding activities in the Provinces also justify the setting up of a sub printing press in Bo. This branch should include a store, a fairly large area for sale of Government publications including stationery, and an annexe to house a workshop to repair government typewriters and duplicating machines. Estimated cost of the building would be Le 60,000, while equipment will cost about Le 40,000.

It would also be worthwhile to erect buildings at Kenema and Makeni for sale of Government publications and

stationery, etc., to make such items more quickly and readily available throughout the Districts. Such buildings would cost about Le 6,000 each.

Provincial servicing of Government typewriters and duplicating machines could be more efficiently handled by a Mobile Typewriter Unit Van with complete tools. Estimated cost of this project is Le 6,000, excluding its personnel.

Sound and Television Broadcasting. For greater economy and efficiency, it is proposed to develop sound and television simultaneously and finally to merge the two media together.

Radio. First priority in broadcasting is the nationwide diffusion of information. This will require the provision of 3 high-power HF and MF transmitters: 1 medium wave transmitter to be installed in the Makeni - Magburaka vicinity for internal coverage; plus 2 shortwave transmitters in the Lungi or Grafton area for external broadcasting.

Provincial Coverage. SLBC, with its single station in Freetown, is at present reaching and utilising only a very limited segment of the population. In order to achieve an overall optimum national and indigenous programme content, Provincial Broadcasting Stations should be located in such strategic provincial areas as Bo, Kenema, Koidu, Bonthe, Makeni, Kabala, Kambia, and Port Loko. These would greatly facilitate the dissemination of information in local languages to rural area. Estimated total cost of these installations is Le 1,828,000.

Broadcasting House. It is proposed to erect a Broadcasting House in Freetown to accomodate both sound broadcasting and television. Its facilities should include 18 studios with latest equipment, and the necessary suites, recording rooms, libraries, workshops, and administrative facilities for both media. The estimated cost is Le 1,800,000, with at least a year required for construction and 18 to 24 months for installation of equipment.

Television. During the Plan period it is hoped to provide nation-wide TV coverage in Sierra Leone. The building of 6 medium power stations at Port Loko, Makeni, Sefadu, Bo, Kenema, and Kabala would cover 80% of the country for television. The remaining 20%, 'shadow' areas in hilly districts, will require a number of low power translator units. The improvement of the present Aberdeen Point coverage and the provision of a new television transmitter at Tower Hill are also planned.

Because SLBV and SLBS are to be merged, development in television is linked to sound broadcasting. Regional radio studios will be co-sited with television studios, and the Freetown Broadcasting House will provide complete facilities for both media.

Staff Training.

The Ministry of Information and Broadcasting will need an additional 12 clerks, 2 clerks in each provincial headquarters and 6 added to the present Ministry staff. Each provincial headquarters will also need a messenger, and 3 more are needed in the Ministry. The increased activities embodied in the Plan would be facilitated by an additional Senior Assistant Secretary for policy making and co-ordination in the Ministry.

Information Services during the Plan period will need 5 additional Information Officers in the Information and Publications sections. The Cinema Section will require 1 cinema officer, 2 technical officers, 4 senior mobile projectionists, 12 mobile projectionists, 1 film and record librarians, and 16 drivers mates to accompany projectionists. It is hoped that UK Technical Assistance, USAID, and the Federal Republic of Germany will provide training in these specialties.

Printing staff required by the Development Plan for both the new Freetown press and the provincial substations is estimated at an additional 60. Most of these can be given intensive in-service training, but it is intended to send 2 officers abroad each year of the Plan period for 3-year intensive courses. It is hoped that appropriate scholarships will be offered by foreign governments.

Broadcasting. At present the SLBS executes a systematic training scheme for both its technical and programme staff. Personnel are sent abroad to Britain, West Germany, Australia, and N.B.C. Nigeria for broadcast programming, journalism, and engineering training. An additional service to the existing training facilities may be furnished by the installing organization or company accepting nominees for training.

For television it is proposed to send 12 staff members overseas for 1-year training on transmitters and camera maintenance. A Production Training Officer together with a Film Director should be recruited for one tour to train staff members locally in various techniques.

techniques. Engineers for the 6 medium power stations to be erected in the Provinces must be sent overseas for training, staggered 3 per year during the initial four years of the Plan period.

Information and Broadcasting Staff Training Requirements

	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Government Information Services			
Information Section			
Information Officers		2	
Publications Section			
Information Officers		2	
Assistant Information Officer		1	
Cinema Section			
Cinema Officer		1	
Technical Officer		2	
Senior Mobile Forjectionist		4	
Mobile Forjectionist		12	
Film & Record Librarian		1	
Drivers mates		16	
Printing			
Deputy Government Printer		1	
Senior Superintendent of Press		1	
Superintendent of Press		1	
Assistant Superintendent of Press		1	
Junior Officers		50	
Broadcasting			
Transmitter Staff			
Senior Engineers		2	
Engineers		8	
Assistant Engineers		12	
Radio Superintendents		6	
Junior Staff - Technical Officers		30	
Studios			
Senior Engineer		1	
Engineer		4	
Assistant Engineers		8	
Radio Superintendents		4	
Junior Staff - Technical Officers		20	
Programme Staff			
National Controller		1	
Regional Controllers		8	
Senior Producers		16	
Producers		16	
Studio Managers		8	
Announcer/Newsreaders		10	
Programme Assistants		16	
Trainees		10	

	Present Staff Availabilities	To be Trained	1970 Staff Requirements
Television			
Transmitter and camera maintenance		12	
Production Training Officer		1	
Film Director		1	
Engineers		12	

Proposed Plan Expenditure on Information and Broadcasting

In Leones

Project	1966-67	1967-68	1968-69	1969-70	1970-71	Total
Buildings						
Ministry headquarters						150,000
Information Centres:						
Do and Makeni						80,000
Information Services						
Information Section						
Telex & Teleprinter						
External Information Svc						500,000
Photographic Section						
Equipment						22,400
Cinema Section						
Film vevers						80,000
Printing Department						
Printing Press Bldg						816,000
Sub-printing Press, Do						100,000
Bookshops, Kenema & Makeni						12,000
Mobile Typewriter Unit Van						6,000
Sound & Television Broadcasting						
Radio Transmitters						
Magburaka 200 KW						862,000
Freetown area 2 x 50 KW						556,000
Supporting equipment						121,000
Provincial Radio Broadcasting Stations						
Do, Bonthe, Kabala, Kambia						
Kenema, Koidu, Makeni, Port Loko						1,328,000
Broadcasting House, Freetown						1,800,000
TV Transmitting Stations	1,000,000	700,000	700,000	700,000	700,000	3,800,000
Aberdeen Point						
Tower Hill						
Do, Kabala, Kenema, Makeni,						
Port Loko, Sefadu						

PART II: RESOURCES & [illegible]

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

III. RESOURCES AND FINANCING

A. FINANCING OF PUBLIC SECTOR DEVELOPMENT

i.e. Sources and Uses of Development Finances

a. Sources to include development finance
available from domestic and external sources

b. Uses to be summary of Proposed Plan Expenditure
as tailored in order to balance out with Sources

To be prepared by Ministry of Finance

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- 9 DEC 1965

PUBLIC CORPORATIONS

In recent years Government has set up a number of public corporations to provide services of a specialised nature to the public. All of these services had previously been performed by a Government department but it was determined that a corporation run along commercial lines and largely divorced from the Government machine could more effectively provide the requisite services to the public.

Public corporations established to date include the

Electricity Corporation
Forest Industries Corporation
Sierra Leone Ports Authority
Road Transport Corporation
Rice Corporation

Each public body has been established by specific legislation spelling out its powers, limitations and relationship with Government. Generally each statutory corporation is accorded complete independence to manage its day to day business, to operate with its own staff, and to keep its accounts on a commercial basis. Government ensures that the corporation's policies and operations are in the public interest through Government's representation on the board of directors, in appointing the general managers, secretaries and chief accountants of each corporation, in arranging independent audits of accounts, and in fixing upper limits of charges for services.

- 9 DEC 1965

DEVELOPMENT PLANNING AND IMPLEMENTATION

Government has recently taken a number of steps to set up adequate machinery to ensure the integration and continuity of effort desired in the planning and implementation of development plans and programmes.

National Planning Council. At the highest level of Government there is a National Economic and Social Development Planning Council responsible for:

a. Periodically reviewing the country's economic position.

b. Approving Plans of economic and social development.

c. Reviewing and formulating Economic Policies to further the nation's development.

d. Approving Annual Development Programmes to implement the Development Plans.

e. Submitting Annual Progress Reports to Parliament on the progress made in developing the country.

The National Planning Council is chaired by the Prime Minister and has 14 members including Ministers, senior civil servants and representatives of public bodies. The Development Office provides the secretariat for the Council.

The National Planning Council has two advisory committees:

1. An Interministerial Development Finance Committee which keeps the budgetary situation under review and recommends ways and means of increasing the internal and external resources available for development purposes.

2. An Economic Policy Co-ordination Committee, composed of public and private members, which keeps the economic situation under review and recommends to the Cabinet, through the National Planning Council, economic policies to reinforce the country's development effort.

Development Office. The Development Office, established as part of the Prime Minister's office, is the co-ordinating agency of Government as regards the planning and implementation of development plans and programmes. It is responsible for:

a. Serving as the executive secretariat and staff for the National Planning Council and its committees.

b. Establishing the goals and broad economic framework of Development Plans and Annual Development Programmes. It calls upon the operating Ministries and agencies to draft sectoral plans, programmes, and projects within these guidelines and based on appreciations of resources available. The Development Office reviews and integrates sector programmes into the central plan in close co-operation with the various operating agencies.

c. Recommending the economic policies and the institutional and administrative measures necessary for execution of the Development Plan.

d. Serving as the co-ordinating agency on all development matters between the various Ministries of Government and the agencies abroad extending technical and financial assistance to Sierra Leone.

e. Preparing periodic progress reports.

f. Preparing economic reviews and studies.

Regional Committees. Regional Planning Committees have been established in the four provinces of Sierra Leone to identify local development needs, assess local resources available, and advise Government on non-local resources required to meet these development needs.

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

L. B. FINANCING OF PRIVATE SECTOR DEVELOPMENT

i.e. Sources and Uses of Private Investment

both domestic and foreign

To be prepared by Bank of Sierra Leone

II. C. SUMMARY OF PUBLIC AND PRIVATE SECTOR FINANCING

Summary of A + B preceding

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

D. SUMMARY OF DEVELOPMENT EXPENDITURES 1962-71

1. Repetition, with necessary revisions, of Development Expenditures 1961-65 as set forth in Chapter IB, plus
2. Revised development estimates 1965-66, and
3. Summary of III A preceding covering 1966-71.

To be prepared by Ministry of Finance

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

E. BALANCE OF PAYMENTS

Expansion of B/P table in Chapter I B. covering

1963 and 1964, plus

Projections 1965-70

To be prepared by Bank of Sierra Leone

SIERRA LEONE FIVE YEAR DEVELOPMENT PLAN

SIERRA LEONE GOVERNMENT

EXTERNAL AID AND EXTERNAL INDEBTEDNESS

In Leones

12 DEC 1965

Original Capital Value		Outstanding 30 Nov 1965
	E X T E R N A L D E B T	
	Medium and Long-Term Debt of Leone	
	Sterling Loans	
261,104	Inter-Colonial Loan 3½ 1943/46 - 1963	
1,430,000	Sierra Leone Government Loan 3½ 1950 - 1968/70	
3,000,000	U. K. Exchequer Loan 5 5/8% 1950/70 - 1974	
1,000,000	U. K. Exchequer Loan 6½% 1960/61 - 1985	
1,000,000	Diamond Corporation 5½% 1961 - 71	
7,000,000	U. K. Commonwealth Assistance Loan at Treasury Bill rate + ½% 1962 - 67	
210,000	Barclays Overseas Development Corporation Loan 7% 1962-68	
1,001,000	West African Currency Board Loan 5% 1962/64 - 1966	
500,000	U. K. Colonial Trust Loan 6% 1963-68	
600,000	U. K. Guma Hydroelectric Station Loan at Exchequer Lending rate + ½% 1963-1983	
1,200,000	S. L. Development Company 6% 1964-70	
255,000	Cable and Wireless Loan at U. K. bank rate + 1½% 1964-72	
2,000,000	U. K. Lungi Airport Loan 6½% 1964-84	
	Total Sterling Loans	
	Non-Sterling Loans	
3,005,000	DM17,000,000 West German Government Highway Loan 3% 1964-84 — is it be 3,050,000?	
35,079	$ 49,949 Barclays Bank, New York, Loan on Residence of S.L.Representative to U. N. 6% 1963	
25,000	$ 35,000 Mortgage on S.L.Embassy, New York 6% 1963	
71,428	$ 200,000 Mortgage on S.L.Chancery, Washington 6% 1963	
4207,857	$ 1,796,000 U. S. Public Law 480 loan resulting from local sale of U.S. agricultural commodities	
	Total Non-Sterling Loans.	

...NAL DEBT — Con'd)

	Contractor Finance	Outstanding Dec 31st 1965
1,700	Administration Buildings - National Construction Co. 1961-66	
6,500	Telecommunications Network - Philips Telecom. Industries 1961-69	
0,913	Pendembu - Kyandohun Road — Viamini S.p.A. 1962-68	
0,204	Luncar Road — Viamini S.p.A. 1962-68	
5,000	Transistor Radios — Philips Telecom. Industries 1963-66	
0,000	Cape Sierra Leone Hotel — Dimengoff Ltd. 1963-71	
4,240	Provincial Water Supplies — Bogrement S.A. 1964-	on list Le 5,800,000
~~27,520~~	Extension to Queen Elizabeth II Quay — Cie. Francaise d'Entreprise 1964-78	
70,541	inc Addendum to contract - 1965-	
0,000	"Daily Mail" — Overseas Newspapers Ltd. 1965-68	
	Total Contractor Finance	
	TOTAL INTERNAL DEBT	

I N T E R N A L D E B T

0,000	Sierra Leone Government	5½% 1957 - 1977/82
9,240	Sierra Leone Government	6½% 1958 - 1973/78
400,000	Post Office Savings Bank	6% 1961
0,000	Sierra Leone Government Development Loan	5½% 1965-80
0,000	Sierra Leone Government Development Loan	6% 1965-74
9,240	Total Internal Loans	
	TOTAL EXTERNAL AND INTERNAL DEBT	

G O V E R N M E N T G U A R A N T E E D L O A N

4,200	IBRD Loan to Electricity Corporation for Kingtom Power Station 5½% 1965-